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ABSTRACT

The recruitment of young people into the teaching profession declined in Canada during the late 1970's and early 1980's. By 1985 the average age of teachers in most provinces rose to around 40. Three major papers presented at a 1985 seminar focused on the implications of this changing age structure for employment policies and services. In "The Teaching Business in Canada," John Holland and Saeed Quazi describe the factors affecting the average age of teachers and the rate of change in the average age, and comment on probable consequences of the changes. Teacher employment is examined in the context of (1) developments in the entire Canadian labor force, (2) population trends, (3) educational demand, (4) salary levels, and other factors. Statistical tables support the arguments. "Aging Workers, Aging Teachers: What Do We Know about Them?" by Philippe Dupuis, identifies the determinants of aging, reviews research on older workers to distinguish myth from reality, and presents preliminary results from a study of the midlife and midcareer attitudes and perceptions of school principals and teachers. "Professional Development: Renewal Strategies," by May Maskow, suggests methods for ensuring the maintenance of effective teaching as the average age of teachers climbs. (PGD)

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DYNAMICS OF AN

AGING TEACHING PROFESSION

Report of a Seminar held in
Ottawa, Ontario, Oct. 20-22, 1985

Canadian Teachers' Federation
110 Argyle Avenue
Ottawa, Ontario
K2P 1B4
October 1985

PREFACE

During the past decade declining enrolment and fiscal restraint have combined to create a teaching profession in which the recruitment of young members has been substantially curtailed and the average age of teachers in most provinces is at or near 40. This change in the age characteristics of the profession has begun to attract attention in various sectors of the educational world.

In view of this increased interest, it seemed appropriate for the Canadian Teachers' Federation to sponsor a seminar at which representatives of the provincial teachers' associations could share information and discuss the implications of the changing age structures for their policies and services.

The seminar featured major presentations on 1) the demographic perspective, 2) the characteristics and perceptions of older workers, and 3) appropriate renewal strategies for teachers in the later stages of their careers. Opportunities for group discussion and information sharing were also provided. The seminar was chaired by Dr. Linda Asper, Vice-President of the Federation.

This report contains the texts of the three major papers presented at the seminar.

Geraldine Gilliss
Director, Research and
Information Services
Canadian Teachers' Federation

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THE TEACHING BUSINESS IN CANADA

Comments on the Demographics of Industrial Organization in the Teaching Profession*

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I. Introduction: Teaching Jobs and University Graduates

The teachers of Canada are a highly-paid, expensively educated group of workers. Since about 1977, their number has waned, but not by any great amount. As a portion of the labour force, however, this decrease has been more dramatic. Teachers are still a predominantly female labour force, but this predominance has been diminishing for a long time. Perhaps the most striking aspect of the evolution of this work force is its increasing average age. In the eleven years from 1972-73 to 1983-84, the average age of public elementary and secondary teachers in Canada (excluding Quebec) increased by about four years. This suggests that the average age for members of this group has been increasing by about four months and ten days every year. The rate of advance in average age has also been increasing, however, and the advance in the average age may already be more than six months per year.

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* Note: The authors acknowledge generous assistance from Statistics Canada (in particular, from personnel in the Education, Culture and Tourism Division and in the Population Projections Section.) It must be noted, however, that information from all sources has been reprocessed to suit the purposes of the authors. Accordingly, all responsibility for errors and misinterpretations belongs solely to the authors.

It is the main purpose of this paper to describe the advancing average age of teachers, and to comment on some of the probable consequences of that phenomenon. It will even be attempted to project the behaviour of that variable into the new century, and to forecast a number of other things that will change for teachers, and about teachers, as the average age in their profession advances. Some of the changes, we predict, will be in large measure effects of that aging, but there are other exciting forces at work in the world to change things, for teachers and for everybody else. Growing older may strongly influence teachers' individual and collective views of all that happens, but it won't necessarily be the major determinant of those happenings.

Let us return to that observation that the number of teachers has been diminishing, slowly, but their portion of the labour force has been eroding more rapidly. Table 1 gives some indication of the relative importance of teaching as a field of employment in Canada outside Quebec. (Quebec is excluded from some of our tables only because of data availability.) This table shows, for the year 1967-68 and for all the years 1970-71 to 1983-84 (for nine provinces and the territories), the numbers of employed elementary and secondary public school teachers, the numbers in the total labour force, and teachers as a percentage of the total labour force.

In 1967-68, the 159,090 teachers were 2.91 per cent of the labour force. In 1972-73, 187,100 teachers were 2.94 per cent of the labour force, which had grown by more than 909,000 in that five years. In the eleven years from 1972-73 to 1983-84, teachers would be reduced from 2.94 per cent of the labour force to 2.11 per cent. They would be 191,610 in number, having peaked at 196,041 in 1977-78. This is not a rate of erosion of the relative importance of an industry that suggests traumatic adjustments, political repercussions, or extreme social problems. Indeed, the fisheries, shoe manufacturers and much of the textile industry would welcome such stability, even of the absolute numbers employed. The state of things in the education industry becomes much more interesting, however, when we look at it from the point of view of a particular class, a class that we can describe approximately as Canadians in the labour force who have university degrees.

Table 1. Labour Force and Educators in Canada
(excluding Quebec)

Year	Educators			Labour Force (000)			Educators as a % of Labour Force		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
1967-68	159,090	60,337	98,753	5,451	3,770	1,680	2.91	1.60	5.88
1972-73	187,100	80,309	106,791	6,360	4,270	2,120	2.94	1.88	5.04
1973-74	186,091	81,512	104,579	6,608	4,355	2,253	2.83	1.87	4.64
1974-75	191,166	84,207	105,959	6,891	4,498	2,334	2.77	1.87	4.54
1975-76	194,340	87,526	106,814	7,327	4,575	2,752	2.65	1.91	3.88
1976-77	195,230	89,130	106,100	7,517	4,649	2,868	2.60	1.92	3.70
1977-78	196,043	91,009	105,034	7,712	4,756	2,983	2.54	1.91	3.52
1978-79	193,596	90,050	103,546	8,055	4,882	3,161	2.40	1.84	3.28
1979-80	192,326	89,869	102,457	8,321	5,002	3,307	2.31	1.79	3.10
1980-81	191,240	89,367	101,873	8,563	5,094	3,469	2.23	1.75	2.94
1981-82	192,822	89,432	103,390	8,834	5,203	3,631	2.18	1.71	2.85
1982-83	191,610	88,516	103,094	8,960	5,250	3,737	2.14	1.69	2.76
1983-84	192,128	88,988	103,140	9,114	5,270	3,818	2.11	1.69	2.70

During the 1970's a university degree became the expected credential for all teachers, and it becomes more correct with each passing year of this period to describe the population of university graduates as the portion of the population from which teachers are recruited. As Table 2 shows, 5.40 per cent of the population over 15 years of age had a university degree in 1976, and 8.01 per cent had a degree in 1981. (These percentages are for all of Canada, but for the moment let us assume that they are about the same for the nine provinces as for all of Canada.) These proportions suggest that, for teaching to have continued to be the promise of employment for university graduates in 1982-83 that it had been in 1972-73 (assuming that the university graduates in each census year are the population from which teachers can be taken the following year), the teaching force would have had to grow by 1.48 times, to 276,908. Teachers would have been 3.09 per cent of the labour force instead of only 2.14 per cent. However, this is still an understatement of the reduction in the teacher employment opportunities for members of the labour force with degrees, because the participation rate of these Canadians (especially the women) also increased, as did the participation rate of the Canadian population generally.

However, the reduction in the numbers of teaching jobs as a portion of the degree-holding population was more marked for women than for men. The portion of male adults with degrees increased by 29.7 per cent (from 7.65 percent to 9.92 per cent). The portion of female adults with degrees increased by 47.7 per cent (from 4.13 per cent to 6.15 per cent). For teaching jobs for women to have stayed the same percentage of the population of women with degrees, the number of women teachers would have had to increase from 106,791 in 1972-73 to 157,730, instead of declining to 103,094. This suggests that the ratio of teaching jobs held by women to the population of women with degrees was 65.4 per cent in 1982-83 of what it had been in 1972-73. However, the female participation rate for Canada increased by about 36.8 per cent between 1972 and 1982. Making the very conservative assumption that the participation rate of women with degrees had the same increase in the decade as did the rate of women generally, the rates of teaching jobs held by women to the number of women in the labour force with a degree was only about 47.8 per cent in 1982-83 of what it had been in 1972-73.

Table 2. University Graduates and Total Population, Canada

Year		Population 15 and over	Population with Bachelor degree or higher	Per cent of population with degrees
			(Actuals to 1981)	
1971	T	13,168,025	719,855	5.40
	M	6,443,365	492,610	7.65
	F	6,724,660	277,255	4.13
1976	T	17,096,430	1,089,030	6.36
	M	8,429,525	708,020	8.39
	F	8,666,905	381,000	4.39
1981	T	18,609,285	1,490,180	8.01
	M	9,151,600	908,155	9.92
	F	9,457,690	582,025	6.15
			(Projected)	
1986	T			9.5
	M			11.4
	F			8.0
1991	T			11.0
	M			12.4
	F			9.8
1996	T			12.5
	M			14.2
	F			11.6
2001	T			14.0
	M			15.5
	F			13.4
2006	T			15.5
	M			16.7
	F			14.4

For the number of teaching jobs for women to have kept pace with the increase in the number of women in the labour force with degrees, there would have had to be about 215,774 women employed as teachers in 1982-83. All this is to say nothing about the numbers or percentages of new jobs for teachers; it is only to point out that teachers are a smaller part of the labour force than they used to be, they are a much smaller portion of the labour force with degrees, and this reduction is more dramatic in the case of women.

In large measure, the university educated population facing traumatic adjustments to the declining ratio of teaching jobs to degrees was composed of young female graduates. This is not to underestimate the difficulties facing young males with degrees. All those young women with degrees who might have become teachers, had opportunity structures remained the same, had to go somewhere. They went into more direct competition with young males in businesses other than teaching. This meant that men would have more difficulty in getting those jobs, and often the real and relative wages would be bid down by the larger numbers of applicants, especially the larger numbers of female applicants. The young male degree holders deserve some sympathy for this new condition -- but so do the young female degree holders who were their competitors. As those young females adjusted to declining opportunities in teaching by looking elsewhere for well-paying jobs, the very fact that they did that meant that those jobs became harder to get and less well-paying.

All of this is to make two points with which to close this introductory section. The first is a negation of a currently popular notion, the second is an affirmation of an old economic truism. The popular notion is to the effect that declining birth rates account for the major part of the changing employment opportunities of would-be teachers. It is true that, if Canadian women had the fertility rates today that they had in the late 1950s, or even the mid-1960s, we would have more teachers employed. But, alas, even when birth rates were high we were increasing the production of university degrees, and we have demonstrated an ability to increase university degrees well in excess of our propensity to reduce fertility rates. The problem in this industry is more the increasing

supply of potential teachers than it is decreasing demand for their services. We ought not to call this a demographic phenomenon, except to the degree that we suppose that women get degrees instead of having babies. The grand old truism is the observation that, as a larger portion of the population gets educated (i.e., gets long, expensive educations), the relative wages of educated or highly skilled workers will move closer to those of less educated or less skilled workers, but the real average wages of all workers will increase. Alfred Marshal expressed the notion this way:

> ...if the number of unskilled labourers were to diminish sufficiently, then those who did unskilled work would have to be paid good wages. If the total production was not increased, these extra wages would have to be paid out of the shares of capital, and of the higher kinds of labour; but even so, the great aim would have been attained of making the increase of wealth hurry up the diminuation of want a little faster. But, if the diminuation of unskilled labour is brought about by increasing the efficiency of labour, it will increase production, and there will be a larger fund to be divided up.
>
> A generation ago so few people got a good education, that for every pound spent on it there might fairly be expected a total return of from perhaps ten to a hundred pounds in after life. But the growth of intelligence has made people more willing to look far ahead; the standard of education has risen in all the ranks of life. So that while the rate of interest on capital invested in material things is about a quarter less than it was, the interest on capital invested in education has perhaps fallen one-half. For each pound invested in education, there is perhaps not more than half as much returned in extra earning in after life as there used to be.[1]

II. A Good Job: The Challenges of Keeping It

Having said that teachers are a highly paid, expensively educated group of workers, it should be noted that, under the present situation in Canada, the second of these conditions is not likely to guarantee the first. Teachers may continue to be a well-paid group of workers for a

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[1] From "Theories and Facts about Wages", printed in the Annual of the Wholesale Co-operative Society for 1885. Quoted here from Marshal's Principles of Economics, ed. by C.W. Guilleband, Vol. 2, Notes, pp. 610-611, MacMillan, London, 1961.

long time, but this will have little to do with the costs of their education. The present levels of teachers' salaries can only be explained by the effectiveness of their professional associations, by contractual arrangements that protect employed teachers from unemployed teachers, and by traditions of long employer-employee relationships. Neither employers nor teachers need concern themselves, in negotiations of wages, with the costs of teachers' education, so long as the numbers of people qualified to teach and looking for jobs exceeds the numbers of teaching jobs.

The surplus of would-be teachers (including those with degrees who will only get professional training if there is a demonstrated demand for their service) may work in the long-run to erode the relative wages of teachers, but there is little evidence that this is happening now. Table 3 gives a pretty good indication of how effectively teachers' salaries have been maintained -- relative to other wages -- over the seven years 1977 to 1983. The indexes offered are based on Statistics Canada data on teachers' salaries for nine provinces to 1980 (Quebec excluded) and eight provinces for 1981 and 1982 (Alberta and Quebec excluded). The median weekly salary of teachers (annual salary divided by 52) was 142 per cent of the average weekly industrial composite wage (for all of Canada) in 1977, and 163 per cent of that composite wage in 1982.

We must not make too much of this apparent relative wage improvement. Most teachers had five years more experience in 1982 than in 1977, and many had acquired new credentials, because in large part they were the same population as in 1977. This is true too of workers reported in the composite industrial index, but their average age may be assumed to have advanced very little, if at all.

Even less should be made of the marked advances in the floor of the "top category". The levels, even the numbers, of categories in which salaries are reported, is a statistical artifact; it was determined by statisticians for their processing and reporting purposes. Statistics Canada reports the data on salaries of teachers in categories suitable to the distribution of the data in a given year. The only interesting point

Table 3. Teachers' Salaries, Canada, and Average Weekly Industrial Composite Wage
1977-78 to 1983-84

Year	Teachers' Salaries										Average Weekly Industrial Composite Wage	Index	Teachers' Median Salary Index	Total Top Reported Category	Top Reported Category Index
	Elementary			Secondary			Total								
	Male	Female	Total	Male	Female	Total	Male	Female	Total	% in Top Category					
1977-78 Median	$19,920	$16,014	$16,938	$22,104	$19,374	$21,306	..	..	$18,408	66.17%	$250	100	142	$16,000+	123
1978-79 Median	21,508	17,350	18,439	23,587	20,914	22,795	$22,696	$17,944	20,023	48.24	264	100	146	20,000+	146
1979-80 Median	23,502	19,116	20,191	25,910	23,072	25,136	24,969	19,632	22,212	32.00	286	100	149	25,000+	168
1980-81 Median	26,223	21,567	22,925	28,260	25,350	27,678	27,581	21,955	24,768	34.17	311	100	153	27,000+	167
1981-82 Median	30,261	24,373	26,305	32,469	29,525	31,825	31,549	25,109	28,513	29.23	348	100	158	32,000+	177
1982-83 Median	34,389	28,185	30,347	36,551	33,235	35,235	35,379	29,031	32,509	13.59	382	100	163	40,000+	201
1983-84 Median	37,485	31,588	33,583	38,917	35,326	37,836	38,259	32,357	35,126	25.77	390	100	-	40,000+	197

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to be made here is that the modal salary category for each of these years is the top category. More teachers were in the top-paying category than in any other -- albeit, the category is not uniform in absolute or relative size. We offer these data only as evidence that, to date, there is very slow replacement of highly-paid senior teachers by less expensive junior teachers. Perhaps more convincing evidence of the ability of highly-paid teachers to resist the competition of less expensive competitors is the fact that the mean salary, which was 105 per cent of the median in 1977-78, fell below the median in 1981, when the two statistics were almost equal, and by 1983-84 was about 99 per cent of the median. This very gradual structural change in the annually reported data will continue as long as the proportion of teachers in the top pay categories increases in relative numbers.

But let us say something more about women teachers and their salaries. In every year except 1981-82 and 1982-83, the top category was modal for both men and women teachers. It was not modal for women elementary teachers in 1981-82, 1982-83 or 1983-84, but this reflected a marked reduction in the numbers of women in the very low categories (and consequently a bunching in the middle range categories), not a slowing in the growth of numbers in the top categories. It is appropriate, then, to say that the top category is modal for women teachers in general, and will probably become modal even for elementary women teachers in a few years. That high modal salary is a much higher relative wage for women than for men.

We do not have a sex-specific aggregate industrial-wage to use as an index, but the following information about the top quintile of male and female incomes will help to make a point:

Year	Incomes		Ratio: Women's to Men's
	Men's	Women's	
1977	$19,269*	$ 9,729*	.505
1978	20,745	10,749	.518
1979	22,498	11,898	.529
1980	25,219	13,250	.525
1981	27,883	15,237	.546
1982	30,395	16,829	.554
1983	31,750	19,784	.560

* lower limit of top quintile

Source: Statistics Canada Catalogue 13-207, Income Distribution by Size in Canada.

The income differential between high income males and females is closing, but not rapidly enough to change by much the obvious greater importance for women than for men of teachers' salaries as means to high income status. Let us regard the bottom limit of the top quintile of income as meaning the minimal wage of a "high paying job". The lowest teacher wages in the modal categories in the years 1977-78 through 1982-83, as factors of the minimal wage for high paying jobs for men and women, were as follows:

Year	Men	Women
1977	.83	1.64
1978	.96	1.86
1979	1.11	2.10
1980	1.07	2.04
1981	1.15	2.10
1982	1.31	2.38
1983	1.26	2.25

These numbers are not intended to tell us anything about how well-paying the job of teaching is or is becoming, for either men or women. But they do tell us something about the relative effectiveness of teaching jobs, for men and for women, as a means to becoming well-paid. In 1982-83, the lowest salary in the modal pay category was 31 per cent higher than our definition of a well paying job for men. That same minimum of the modal pay category was 138 per cent higher than our definition of a well paying job for women.

Now it is true that many women have long since begun to consider themselves in direct competition with both men and women in their fields, not just with other women and, partially for this reason, the labour market behaviour of women is coming to be more similar to the same behaviour of men, generally and in virtually every field where significant numbers of both men and women work. It is the case that men teachers are more likely to have long and continuous careers than are women, but it is also the case that this is becoming a less important difference between men teachers and women teachers, and teachers of both sexes are becoming a very stable workforce. Most teachers are in jobs they intend to keep, until they retire, or until they are promoted or transferred to other jobs with comparable job security. Of those who do leave their jobs, it

appears that in most cases it will be to take another teaching job. Of those who do leave one teaching job without another to go to, some will return to university for more credentials, and many of the rest will seek new teaching jobs, even if they take other employment in the meantime.

The labour market behaviour of teachers that we are now witnessing is in accord with what we have read about the behaviour of well organized workers, i.e., of workers with very effective unions. In 1980, Daniel Mitchell, in his book, Unions, Wages and Inflation, described employment and wages in organized industries this way:

> Union pay rates tend to be above market levels. Normally a queue of workers will be ready to accept work at the current union wage. During periods of high unemployment, the queue will lengthen, but its length is not of special interest to either the union or the employer.[2]

Mitchell also pointed out, as had others before him, that "the characteristics of heavily unionized industries suggest longer employee-employer relationships than generally exist in other industries."[3] This seems a fair generalization about the teaching business as it is known to have been for a long, long time. Quite likely, the propensity of teachers to stay in their jobs that we mentioned above is not simply a result of unionization. It may well be that unionization only reinforces the long employer-employee relationship.

Mitchell and others (notably G.E. Johnson, 1974)[4] have also made an important point about union wages: there is no incontrovertible case to be made that unionization causes wages to be higher. It may be "that highly-paid workers are more likely to become unionized".[5] Unquestionably, teachers' associations in Canada did not begin to act like unions,

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[2] Daniel J.B. Mitchell, Unions, Wages and Inflation, The Brookings Institute, Washington, D.C., 1980, p.212.

[3] Ibid.

[4] George E. Johnson, "Economic Analysis of Trade Unionism", American Economic Review, Vol. 65, May, 1975, p.25.

[5] Mitchell, op cit.

not very effective unions at any rate, until the conditions of the 1960's and early 1970's had already turned teaching into a well-paying job. Other points can be taken from the literature of industrial organizations that seem to be of some relevance to the current population of teachers. We often read that the propensity of an industry to organize "is positively correlated with other industry characteristics such as the size of the establishment, the capital intensity of the productive process, and the proportion of male employees"[6] (Mitchell's words, but many writers have said more or less the same). Modern school systems are big establishments, and they are far more capital intensive operations than typical school board budgets would lead us to believe. This leaves something to be said about the proportion of male employees. Rather than describe the well organized teaching industry as predominantly female and thus an exception, it is more appropriate to point out that it is less female than it used to be; it was the first really large employer of females that paid females well, well by the same standard applied to male workers. It should come as no great surprise, then, that the labour market behaviour of females -- including their organizing propensities, their proprietary attitudes toward their jobs and their pay expectations -- is becoming ever more like that of men teachers, and like the behaviour of men in all good trade unions, including all the effective professional associations.

Teachers now at work intend to stay in the job in most cases to retirement and, generally, they have strong professional organizations to support them in this intention. As will be pointed out several times below, retirement begins to occur at an appreciable rate among teachers at age 54. Relatively few teachers stay at their jobs to retire at the age of 65. Teachers' propensities to retire early, like their job security and high wages, reflect long traditions of long-term employee-employer relationships and well established traditions as to equitable treatment of long-serving, highly qualified employees, traditions now buttressed by negotiated contractual arrangements. The projections to be presented in this paper are based on presumptions that the strong position of employed teachers will continue through this century. Teachers now employed will continue to be well paid, to have a high degree of protection from

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[6] Daniel J.B. Mitchell, p.212.

would-be new teachers, and to retire at predictable rates in their middle and late fifties and early sixties.

There are, of course, contingencies and sets of conditions that might significantly, even dramatically, undermine the situation of these well-organized workers. The first contingency that must be thought about is a serious erosion of the effectiveness of their organizations. This could happen suddenly, or it could take place over a decade or longer and still affect the working conditions of most teachers now employed. And if this happens, it may happen to teachers only, to all public sector workers, or to all organized groups of workers. For ideological reasons, for reasons of inter-regional and inter-national competition, or for a combination of these and other reasons, the ability of organizations to protect their members could deteriorate significantly over a period of a decade or less. The effectiveness of a particular organized profession or trade could also be traumatically diminished almost overnight.

The most probable cause for such drastic reduction in power and influence is a major industrial relations blunder on the part of an organized group. We might refer to this contingency as the Air Controllers' Syndrome. The membership or leadership of an organization might drastically underestimate the power of the management organization they are dealing with, the will and determination of the persons representing management, and popular attitudes about the current demands of a group of organized workers. A single badly chosen job-action could be the immediate cause of the destruction of the effectiveness of an organization. Even more likely to cause this loss of effectiveness is a series of unpopular actions such as strikes that inconvenience too many people for too long.

This, of course, is all a matter of strategy and public relations. Our main concern in this paper is demographics. And there is at least one demographic development of lethal potential for the well organized public sector professions, but especially for teachers. It is the relentless increase in the numbers of university educated young people, especially women, who are not going to be able to work as highly-paid civil servants or teachers. They will find work, and they will do quite well, better at

any rate than those less educated than they. But, in the perceptions of many of them, teachers and civil servants will be better paid, enjoying more security, and having more leisure and less stress. As they increase in numbers and as a portion of the adult population, they will be a factor complicating the business of making strategy and handling the public relations for teachers.

It should be pointed out that in the early 1970s, about two-thirds of all university graduates in Canada (all ages) worked in the public sector. About half of these public-sector employed degree holders were civil servants and about half of them were teachers (elementary, secondary and higher education). Not surprisingly, university graduates were tolerant of high wages in the public sector. Many of them are less so now, and more will be less tolerant of what they perceive to be preferential treatment of public-sector employees with degrees. Very, very few new graduates will get teaching or civil service jobs in the foreseeable future. The proportion of the total population of graduates who see teachers and civil servants as "them" and the private sector as "us" will grow relentlessly. The transfer of ambitions from public-sector employment to private-sector employment will affect women more than men, and as things now are, fewer women than men will find jobs in the private sector that pay as well as teaching or being a civil servant.

This growing population of university graduates, especially of women graduates, will think of themselves as users of teachers' services more than as potential teachers or colleagues of teachers. They will have few children, have them quite late in life, and want to send them to better than average schools. Better than average schools will mean to them schools attended by children of higher than average performance and from high-income, achievement-oriented families. Many parents in this class are now getting and will continue to get what they want in the way of privileged education in some part of the public school system. In many places, French language schools provide something approximating private schools within the public school system. In some jurisdictions, special programs or whole schools for "the gifted" are provided as part of the public system. In a few places, schools that get public funding but

behave like private schools in important ways can be found associated with universities. The pressure on these private-type schools within public systems will increase. In some cases, the pressure will not be effective, and many would-be students will be rejected. In some cases, the pressure will be effective, and students will be accepted to the point where the schools can no longer be exclusive, selective or prestigious. Whichever way school systems react to the pressure to be "less selective in providing exclusive educational services", they will create new candidates for private schools.

The fact of the matter is, some parents who are very ambitious for their children are getting special services for their children from public schools that other parents, ambitious for their children to the same degree are buying from private schools. This quite naturally contributes to the popularity of partial or total subsidy of the costs of private schools for all who insist on them. Vouchers, institutional grants, tax breaks and other tactics to subsidize private schooling become what more people want.

Educators have long used the lazy "s" to describe learning curves. A figure something like this

is often used to indicate a slow beginning to something that picks up speed, then slows before it reaches its maximum. It's a good device for depicting many things, such as social or attitudinal changes. It may be a pretty good picture of the present and future of private schools in Canada. Suppose that the arrow indicates the present situation. Private school enrolments have been increasing and there is an observable increase in the rate of increase. We may be close to a much more rapid increase in the rate of increase. And, of course, we may not be!

This paper will proceed on the assumption that there will not be a dramatic increase in private school enrolments -- only a persistent gradual increase. We do, however, believe that the most likely threat to the organized teaching profession is a rapid increase in private school enrolments. We urge the strategists for teacher organizations to keep these points, these possibly connected points, in mind when planning for negotiations, job actions and public relations:

- Public elementary-secondary teachers are well paid, and could be replaced by less-well paid teachers from the ever growing ranks of university graduates, especially women graduates.

- Women graduates do now and will continue to have difficulty finding large numbers of well-paying jobs in the private sector.

- University graduates in the private sector will increase in relation to university graduates in the public sector.

- Unions and professional organizations are seen by many as contributing to public expenditure (and by extension, to deficits), and to high unit costs of production in Canadian industry.

- Fewer children per family make it possible -- but not easy -- for more families to send their children to private schools.

- The surplus of would-be teachers makes it possible, in some cases, for private schools to hire less expensive teachers than those employed in public schools.

- The rationing of "prestigious" or "selective" schooling within public systems is becoming a political issue in parts of Canada.

- Tactics for subsidizing private education are becoming of interest to more people.

III. Taking Stock: Measurements of a Profession

Perhaps the most important variable in the business of predicting economic activity next year is inventory change. If we think we know the net of all inventory increases and reductions, we tend to be confident in our predictions. Capital investment, expenditures on buildings and machinery, is the other variable crucial to economic forecasting, but it can be construed to be a class of inventory change. The forecaster who believes he knows both what additions will be made to material and capital stocks next year will be very confident of his predictions. He won't worry much about consumer behaviour. That will be mainly a function of demographics. It will vary with the numbers of people in several categories of sex, age, and family status. Rates of consumer spending do vary, but in comparison with spending on inventory and capital, this variable is stable and predictable.

Opportunities for selling to or getting employment with an industry are a function of its plans to add to capital and inventory. No doubt these plans are affected by the expectations of the industry's decision-makers concerning future levels of consumer demand, but the variables of more immediate importance, to people looking for work or sales in the industry, are the industry's short-term plans for changes in inventory and capital stock. Would-be employees and suppliers get this information any way they can. It is the usual thing to look at how an industry has been behaving recently, and suppose it will continue to behave the same way, unless one has a pretty good reason to suppose some changes in the environment will change the behaviour of its decision-makers.

Education is a very particular industry, and different from all the others -- but this can be said for every industry, of course -- and one of its particularisms is that we use numbers of teachers employed as the measure of the size of the industry, rather than the dollar value of fixed investment, and we use numbers of students served as the measure of product, not the dollar value of goods and services produced. It has become conventional to estimate the future demand for employment in the

industry by looking at numbers employed now, i.e., the teacher stock, then looking at actual present and probable future enrolments for insights as to what net changes in that stock will be. If we want to estimate the erosion of that stock and the probable rate of replacement hiring, we look to the demographics of teachers. We do not make predictions about employment in the education industry on the basis of probable future demand for services measured in dollars and probable future unit costs of teachers.

Let us deal first with the indexes of demand in the industry, enrolments. Diagram 1 and Table 4 present the picture of enrolment as a recent historical phenomenon. The data presented here, we should note, pertain only to public elementary and secondary schools. The point has already been made that declining enrolment, as the determinant of relative opportunity for employment as a teacher, has been over-rated. But however significant that decline was, it is almost behind us. Enrolments are a rather stable phenomenon now.

The first column in Table 4 is the number of live births that correspond to grade one, i.e., six years earlier. By the standards of the two earlier decades, these numbers reflect constancy. That constancy, in turn, means that the larger variations in enrolments in the upper grades will be modified in the years to come. In most of the elementary grades, in the years since 1977, a close approximation of constancy is already evident. Even total enrolment has become markedly more constant in very recent years.

Tables 5 and 6 are two sets of public-schools enrolment projections for the years 1984-85 through 2005-06. It is apparent that, in our view, constancy will continue to be the rule, i.e., constant by comparison with our experiences in the decades before the mid-1970s. We have chosen to call Table 5 our high projection, and Table 6 our low projection. In both cases, there will be fewer students in all grades in 2005-06 than in 1984-85, about 6.5 per cent fewer in the higher case, and about 18.3 per cent fewer in the lower case. It should be noted that, in the first

Table 4. Elementary and Secondary Public School Enrolments in Canada, 1974-75 to 1983-84

	Live Births[1]	Pre-El	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12	Gr 13	Sp Ed	Total
1974-75	364310	369422	377857	372870	390636	422881	448364	451236	349193	442898	465283	458126	384220	317603	51074	114703	5416366
1975-76	369647	382303	380065	363452	366501	387732	418374	444137	344498	438127	454393	441640	406882	328774	54141	160351	5371375
1976-77	371988	374416	383287	365639	359061	367735	386628	418183	340966	437884	454563	429365	395605	344018	55513	171164	5284027
1977-78	362187	363942	374315	367991	361057	359447	367358	358627	320881	430236	451177	428272	385098	342414	54164	179998	5171977
1978-79	347319	360752	356526	359062	363202	360146	356927	364290	297620	400628	441794	428816	385731	331585	53160	192630	5052869
1979-80	343373	362484	350114	343257	355621	362109	358561	358494	364182	379022	422876	425633	372244	236944	52293	191575	4935409
1980-81	350650	379469	350729	337188	340041	356757	361302	360723	352934	359250	394064	405175	369125	241905	53568	194195	4856425
1981-82	359323	371961	367989	347140	343422	347310	362413	373108	365597	357665	381220	380966	358375	244723	55987	112419	4770295
1982-83	359987	378606	362716	354470	344709	341651	345692	364532	368749	357409	374012	368007	342186	247752	60639	115480	4726810
1983-84	361400	381014	363832	349009	349302	340834	338845	347987	365863	355354	375343	364422	338877	254399	60313	114054	4700448

[1] Live births six years earlier, i.e., the first figure is births in 1968.

Diagram 1. Canada: Total Enrolment, Publicly Supported K-13, 1974-75 to 2005-06

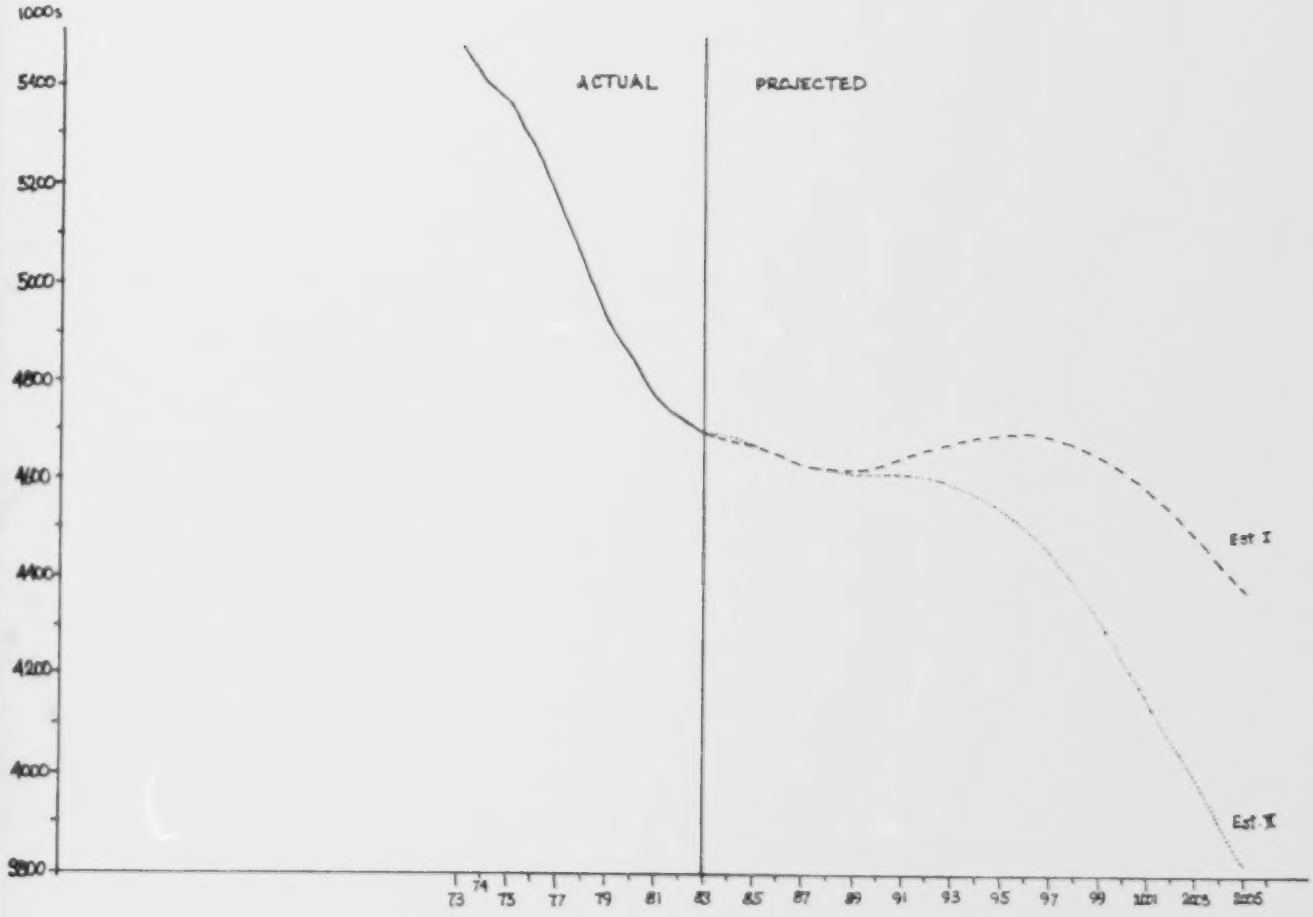


Table 5. Elementary and Secondary Public Schools Enrolment Projections, Canada
1984-85 to 2005-06

	Pre-El	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12	Gr 13	Sp Ed	Total
1984-85	387248	361364	350246	344472	345809	338107	340878	347987	353058	373122	365584	335268	264324	62327.8	112929	4682724
1985-86	390024	368809	347813	345868	341888	343734	340474	337469	339287	369828	361928	332682	274920	64759.4	112575	4672059
1986-87	391166	373489	354979	343465	343274	339837	346140	337069	329033	355403	358733	329355	272799	67355.4	112075	4654173
1987-88	392398	374131	359483	350541	340889	341214	342216	342679	328643	344662	344741	326447	270071	66835.7	111579	4636530
1988-89	394604	375679	360101	354990	347912	338844	343603	338794	334112	344253	334322	313715	267687	66167.3	111245	4626027
1989-90	396670	375898	361591	355600	352327	345825	341216	340167	330324	349982	333925	304233	257246	65583.2	111076	4621663
1990-91	398195	379122	361802	357071	352933	350213	348246	337804	331663	346014	339483	303872	249471	63025.3	111259	4630173
1991-92	398352	381238	364905	357279	354393	350815	352665	344763	329359	347417	335634	308929	249175	61120.4	111718	4647762
1992-93	397196	382044	366942	360344	354600	352267	353271	349138	336144	345003	336994	305427	253322	61047.9	112227	4665965
1993-94	394726	381540	367717	362355	357641	352472	354733	349738	340410	352111	334653	306665	250450	62063.9	112659	4679934
1994-95	390994	379828	367232	363121	359637	355495	354939	351185	340995	356579	341548	304534	251465	61360.2	113074	4691987
1995-96	386263	376805	365584	362642	360397	357479	357984	351390	342406	357192	345882	310808	249718	61608.9	113397	4699556
1996-97	380850	372674	362675	361015	359922	358235	359982	354404	342605	358670	346476	314752	254863	61180.9	113601	4701905
1997-98	374963	367738	358699	358141	358307	357763	360743	356382	345544	358879	347910	315293	258097	62441.4	113560	4694460
1998-99	368814	362297	353948	354215	355455	356157	360267	357135	347472	361957	348113	316598	258541	63233.7	113276	4677479
1999-2000	362664	356454	348711	349523	351558	353323	358650	356664	348207	363977	351098	316782	259610	63342.5	112803	4653370
2000-01	356725	350509	343087	344352	346902	349449	355796	355064	347748	364747	353058	319499	259762	63604.5	112147	4622449
2001-02	351206	344666	337365	338798	341769	344821	351895	352238	346187	364266	353804	321283	261990	63641.6	111314	4585243
2002-03	346265	339125	331741	333148	336257	339719	347234	348376	343432	362631	353338	321962	263452	64187.4	110284	4541152
2003-04	341955	334087	326408	327594	330649	334240	342097	343762	339667	359745	351752	321537	264009	64545.7	109083	4491130
2004-05	338381	329654	321559	322328	325137	328665	336580	338676	335168	355801	348953	320094	263661	64682.1	107756	4437095
2005-06	335648	325825	317292	317539	319910	323187	330966	333214	330209	351088	345127	317547	262477	64596.8	106352	4380979

Demographic Assumptions: Fertility Rate 1.6
Annual Net Immigration 50,000

Source: Population Projections for Canada, Provinces and Territories, 1981-2006 (Occasional, Catalogue 91-520). Population Projections Section, Demography Division, Statistics Canada, 1985. Projection F16LC

Table 6. Elementary and Secondary Public Schools Enrolment Projections, Canada
1984-85 to 2005-06

	Pre-El	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12	Gr 13	Sp Ed	Total
1984-85	387248	361364	350246	344472	345809	338107	340878	347987	353058	373122	365584	335268	264324	62327.8	112929	4682724
1985-86	390024	368809	347813	345868	341888	343734	340474	337469	339287	369828	361928	332682	274920	64759.4	112575	4672059
1986-87	391166	373489	354979	343465	343274	339837	346140	337069	329033	355403	358733	329355	272799	67355.4	112075	4654173
1987-88	392398	374131	359483	350541	340889	341214	342216	342679	328643	344662	344741	326447	270071	66835.7	111579	4636530
1988-89	394604	375679	360101	354990	347912	338844	343603	338794	334112	344253	334322	313715	267687	66167.3	111245	4626027
1989-90	390247	376492	361591	355600	352327	345825	341216	340167	330324	349982	333925	304233	257246	65583.2	111092	4615850
1990-91	381533	379908	362374	357071	352933	350215	348246	337804	331663	346014	339483	303872	249471	63025.3	111296	4614905
1991-92	376330	368141	365661	357844	354393	350815	352665	344763	329359	347417	335634	308929	249175	61120.4	111400	4613647
1992-93	370338	363204	354336	361091	355160	352267	353271	349138	336144	345003	336994	305427	253322	61047.9	111413	4608156
1993-94	362927	358166	349584	349907	358383	353029	354733	349738	340410	352111	334653	306665	250450	62063.9	111237	4594055
1994-95	354833	351718	344735	345214	347282	356232	355500	351185	340995	356579	341548	304534	251465	61360.2	110925	4574107
1995-96	345950	343961	338529	340426	342625	345199	358726	351945	342406	357192	345882	310808	249718	61608.9	110404	4545378
1996-97	336384	336203	331062	334297	337872	340569	347615	355139	343147	358670	346476	314752	254863	61180.9	109670	4507901
1997-98	327291	326934	323595	326924	331790	335945	342953	344139	346260	359446	347910	315293	258097	62441.4	108584	4457504
1998-99	318724	317866	314674	319550	324472	329799	338196	339524	335535	362707	348663	316598	258541	63233.7	107173	4395256
1999-2000	310314	309504	305946	310741	317154	322525	332108	334814	331036	351473	351826	317283	259610	63342.5	105499	4323176
2000-01	303061	301444	297898	302122	308410	315251	324783	328787	326444	346760	340929	320162	260172	63604.5	103593	4243419
2001-02	298331	293384	290140	294174	299856	306560	317458	321535	320567	341950	336357	310245	262533	63742.2	101480	4158311
2002-03	295177	287541	282382	286513	291968	298057	308705	314283	313497	335794	331691	306085	254401	64320.5	99231	4069646
2003-04	297752	284316	276758	278852	284364	290216	300143	305618	306426	328388	325720	301839	250990	62328.3	97091	3990802
2004-05	290394	281496	273654	273299	276761	282658	292247	297142	297978	320981	318536	296405	247508	61492.4	95044	3905596
2005-06	288870	279178	270940	270233	271249	275100	284637	289325	289713	312132	311352	289868	243052	60639.5	93080	3829369

Demographic Assumptions: Fertility Rate of 1.4 (gradual reduction from 1.6 to 1.4 by 1996)
Annual Net Immigration of 100,000

Source: Population Projections for Canada, Provinces and Territories, 1981-2006 (Occasional, Catalogue 91-520). Population Projections Section, Demography Division, Statistics Canada, 1985. Projection 14HC

column, pre-elementary enrolments decline about 26.8 per cent in the years 1988-89 to 2005-06 in the lower projection, and by about 15.8 per cent between 1991-92 and 2005-06 in the higher estimate. This difference reflects the major different assumptions on which the two projections are based; Table 5 assumes a fertility rate of 1.6 and Table 6 assumes a fertility rate of 1.4, in the years after 1984-85. (Other assumptions are stated on the tables.)

Tables 7 and 8 are the high and low projections for all schools, public and private, and Diagram 2 gives some indication of both the relative magnitudes and recent trends in the two systems. It must be noted at the outset that these tables are not the exact equivalents of Tables 5 and 6 with the non-public schools added. As with Table 5, Table 7 assumes a fertility rate of 1.6, and Table 8, like Table 6, assumes a fertility rate of 1.4. However, these fertility rates are paired with assumptions about net immigration rates which differ from those in the earlier two tables. (See notes on tables.) Because in these tables assumptions of relatively high fertility and relatively high net immigration rates are paired (Table 7), and relatively low fertility rates and net immigration rates are paired, the differences in the high and low projections are greater than in Tables 5 and 6. The high projection for 2005-06 is 5,010,269, and the low projection is 4,239,380. We are willing to postulate that these numbers bracket all reasonable projections for that year which do not assume radical social changes or traumatic contingencies.

Diagram 3 depicts three assumptions about pupil/teacher ratios. The high one, 18.0, is to assume that this ratio stabilizes at a point just below the 1983-84 rate. The second hypothetical ratio assumes that the decline in the years to come gradually moves to 17.0, and the third assumes a decline to 16.0.

Table 7. Elementary and Secondary Public and Private School Projections
1984-85 to 2005-06

	84/5	85/6	86/7	87/8	88/9	89/90	90/1	91/2	92/3	93/4	94/5	95/6
Pre-												
Elem.	411930	424701	425514	428881	424933	433989	438401	441536	443394	443742	442581	440259
Gr. 1	377633	382909	394539	395292	398415	394969	403368	407568	410475	412198	412629	411767
	366233	364114	369201	380414	381141	384152	380829	388928	392977	395780	397441	397857
	359981	362387	360290	365324	376420	377139	380118	376831	384844	388851	391624	393268
	361000	357064	359451	357371	362364	373370	374083	377038	373777	381726	385700	388451
	353470	359273	355356	357732	355662	360631	371584	372294	375235	371989	379900	383855
	355264	355735	361575	357633	360024	357941	362942	373965	374679	377639	374373	382334
	376677	369809	370299	376379	372275	374764	372595	377801	389275	390019	393100	389700
	380754	364892	358239	358714	364603	360628	363039	360938	365981	377096	377817	380801
	399068	398600	381995	375030	375527	381692	377531	380055	377855	383135	394771	395525
	388244	389105	388649	372458	365667	366152	372163	368105	370566	368422	373569	384915
	367285	370804	371626	371190	355727	349241	349704	355445	351570	353920	351872	356788
	270454	267342	269903	270502	270185	258929	254208	254545	258724	255903	257614	256123
	69987	69163	68368	69022	69176	69094	66216	65009	65095	66164	65442	65880
Spec.	68321	68279	68556	69032	69402	69846	70447	71059	71748	72329	72658	72927
	43635	43634	43212	42560	41920	41594	41440	41537	41556	41665	42124	42590
	3411263	3409164	3423021	3446773	3465239	3487429	3517406	3547957	3582385	3611369	3627823	3641220
	1538673	1538648	1523752	1500762	1478201	1466702	1461261	1464696	1465366	1469208	1485392	1501821
Total	4949936	4947812	4946773	4947535	4943440	4954131	4978668	5012652	5047751	5080577	5113216	5143041

	96/7	97/8	98/9	99/00	00/1	01/2	02/3	03/4	04/5	05/6
Pre-										
Elem.	436776	432248	427255	421683	416110	410537	405196	400552	396372	393005
Gr. 1	409614	406384	402184	397446	392277	387109	381940	377095	372680	368911
	397026	394950	391835	387786	383217	378234	373250	368267	363595	359338
	393679	392857	390803	387721	383714	379194	374262	369331	364400	359777
	390082	390489	389674	387636	384579	380605	376121	371230	366338	361447
	386593	388216	388621	387810	385782	382739	378784	374322	369454	364586
	386315	389070	390703	391112	390295	388254	385192	381211	376720	371821
	397987	402131	404999	406699	407124	406274	404149	400962	396818	392144
	377508	385536	389550	392328	393975	394387	393563	391505	388417	384404
	398650	395202	403606	407808	410717	412441	412872	412010	409855	406623
	385651	388697	385335	393530	397627	400463	402144	402564	401724	399623
	367624	369327	371236	368026	375852	379765	382474	384079	384480	383678
	259702	267589	268100	270218	267881	273578	276426	278398	279566	279859
	65498	66414	68431	68561	69103	68505	69962	70691	71195	71494
Spec.	73076	73204	73076	72762	72289	71681	70968	70192	69381	68576
	43112	43378	43684	44017	44398	44794	45060	45173	45146	44985
	3648655	3655084	3648701	3632982	3609362	3579012	3543426	3504666	3464176	3424009
	1520237	1529606	1540392	1552160	1565577	1579546	1588938	1592915	1591967	1586260
Total	5168892	5184690	5189093	5185142	5174939	5158558	5132364	5097581	5056142	5010269

Demographic Assumptions: Fertility Rate of 1.6 (constancy at current rate)
Annual Net Immigration of 100,000

Note: In making these projections, we have used a Statistics Canada model prepared by Mr. Warren Clark of the Projections Section, Education, Culture and Tourism Division, and Statistics Canada data. We must acknowledge their kind assistance. However, the assumptions used are ours, and thus so is responsibility for errors.

Table 8. Elementary and Secondary Public and Private School Projections
1984-85 to 2005-06

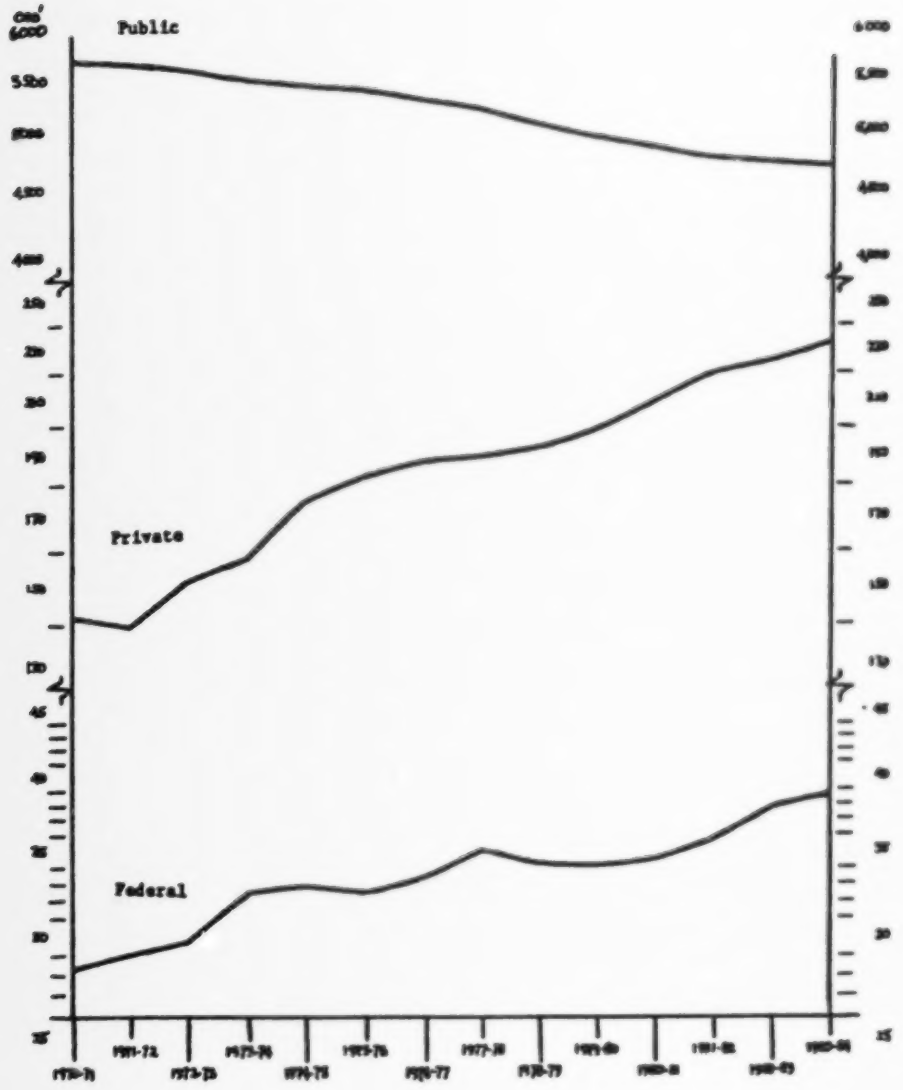
	84/5	85/6	86/7	87/8	88/9	89/90	90/1	91/2	92/3	93/4	94/5	95/6
Pre-												
Elem.	411930	424701	425282	428416	424353	430042	427720	424353	418664	412743	405080	395676
Gr. 1	377633	382694	394323	394862	397769	394000	399384	397123	394000	388724	383232	376233
	366233	364114	368993	380207	380726	383529	379895	385086	382906	379895	374808	369513
	359981	362387	360290	365119	376214	376728	379502	375906	381043	378885	375906	370872
	361000	357064	359451	357371	362160	373166	373675	376427	372860	377955	375815	372860
	353470	359273	355356	357732	355662	360428	371381	371888	374626	371077	376147	374018
	355264	355735	361575	357633	360024	357941	362738	373761	374271	377027	373454	378558
	376677	369809	370299	376379	372275	374764	372595	377588	389063	389594	392462	388744
	380754	364892	358239	358714	364603	360628	363039	360938	365775	376890	377405	380184
	399068	398600	381995	375030	375527	381692	377531	380055	377855	382919	394555	395094
	388244	389105	388649	372458	365667	366152	372163	368105	370566	368422	373359	384705
	367285	370804	371626	371190	355727	349241	349704	355445	351570	353920	351872	356587
	270454	267342	269903	270502	270185	258929	254208	254545	258724	255903	257614	256123
	69987	69163	68368	69022	69176	69094	66216	65009	65095	66164	65442	65880
Spec.	68321	68275	68543	69005	69360	69717	70099	70367	70575	70566	70188	69623
	43635	43634	43212	42560	41920	41594	41440	41537	41556	41659	42112	42565
	3411263	3408944	3422353	3445438	3463146	3480942	3500027	3513437	3523783	3523356	3504499	3476280
	1538673	1538648	1523752	1500762	1478201	1466702	1461261	1464696	1465366	1468986	1484954	1500955
Total	4949936	4947593	4946105	4946200	4941347	4947644	4961288	4978133	4989149	4992342	4989453	4977235

	96/7	97/8	98/9	99/00	00/1	01/2	02/3	03/4	04/5	05/6
Pre-										
Elem.	386155	374777	363632	353066	342617	332400	324505	319629	315333	311734
Gr. 1	367403	358574	348021	337684	327993	318301	308718	301503	296981	292997
	362764	354250	345737	335562	325595	316250	306906	297666	290710	286349
	365633	358955	350531	342106	332038	322176	312930	303694	294540	287657
	367867	362670	356046	347690	339334	329348	319565	310394	301223	292154
	371077	366107	360935	354343	346027	337711	327772	318037	308909	299782
	376414	373454	368453	363248	356614	348244	339875	329873	320075	310889
	394056	391825	388744	383538	378120	371214	362502	353790	343378	333179
	376582	381728	379566	376582	371539	366290	359600	351161	342721	332635
	398003	394232	399619	397357	394232	388953	383458	376455	367620	358785
	385230	388067	384390	389643	387436	384390	379242	373885	367056	358442
	367424	367925	370634	367123	372139	370032	367123	362206	357089	350567
	259556	267443	267808	269780	267224	270876	269342	267224	263645	259921
	65498	66376	68393	68487	68991	68337	69271	68879	68337	67422
Spec.	68832	67900	66660	65273	63762	62169	60543	58977	57508	56149
	43071	43314	43513	43558	43489	43272	42859	42281	41554	40719
	3436783	3390240	3328325	3259093	3183638	3104104	3022917	2944713	2871378	2803524
	1518782	1527358	1534358	1535946	1533512	1525860	1511294	1490929	1465302	1435856
Total	4955565	4917598	4862683	4795039	4717150	4629964	4534212	4435642	4336680	4239380

Demographic Assumptions: Fertility Rate of 1.4 (decline from 1.6 to 1.4 by 1996)
Annual Net Immigration of 50,000

Note: In making these projections, we have used a Statistics Canada model prepared by Mr. Warren Clark of the Projections Section, Education, Culture and Tourism Division, and Statistics Canada data. We must acknowledge their kind assistance. However, the assumptions used are ours, and thus so is responsibility for errors.

Diagram 2. Total Enrolment by Type of School, 1970-71 to 1983-84, Canada*



*Adapted from a diagram in Statistics Canada Catalogue 81-201

Diagram 3. Actual and Projected Pupil/Teacher Ratio in Canada
1960-61 to 2006 (Public Elementary and Secondary Schools)

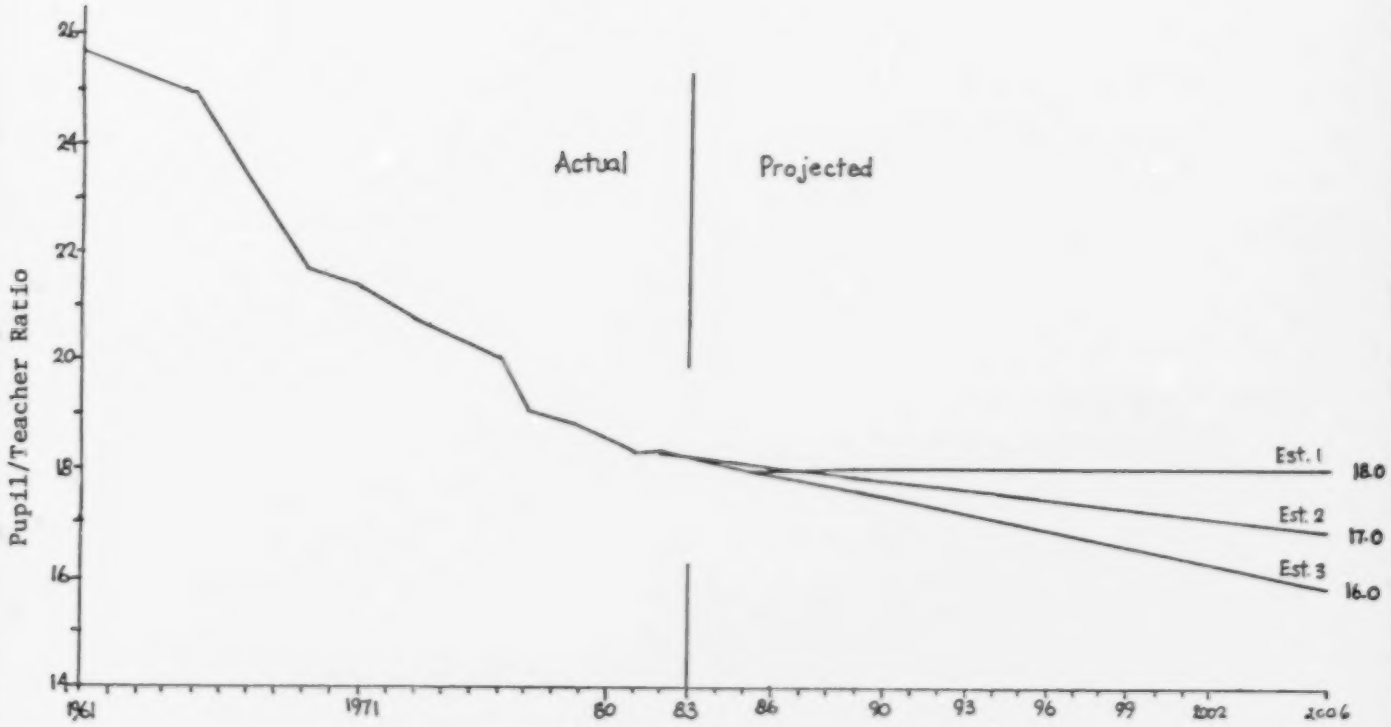


Table 9 presents a summary of historical and projected enrolments, pupil/teacher ratios, and numbers of teachers employed. This table applies to the entire industry, public and private. The two enrolment-projection series are the projections from Tables 7 and 8. Combined with the three hypothetical pupil/teacher ratios, they give us six series of projections of numbers of teachers that will be employed every year to 2005-06. The highest projection shows an employed teacher population of 313,141, about 14.7 per cent more teachers than were employed in 1984-85. The lowest shows 235,521 at work, about 13.6 per cent fewer than were at work in 1984-85. The first of these is based on the high enrolment projection and the lowest pupil/teacher hypothesis. The second is based on the lower enrolment projection and highest pupil/teacher hypothesis.

Diagram 4 depicts the same projections. It is our supposition that the lowest pupil/teacher ratio and the higher enrolment projection are not likely to go together. Nevertheless, we do believe that these six projections will very likely bracket the actual numbers that only time will reveal.

Our main interest is not all teachers, of course, it is those teachers working in the public system. Table 10 gives the same projection as Table 9, but for public-system teachers only. The highest projection is for 273,811 teachers at work in 2005-06, about 6.5 per cent more than in 1984-85. The lowest is for 212,743, about 17.4 per cent fewer than in 1984-85. The first is based on the higher enrolment projection and the lowest pupil/teacher ratio, the second on the lower enrolment projection and highest pupil/teacher ratio.

The range is not as great as in Table 9, because we have not paired a high fertility assumption with a high net immigration assumption. We believe this narrower range to be a better estimate of the probable limits of future teacher employment. Diagram 5 presents this same information.

Table 9. Historical and Projected Enrolments, Pupil/Teacher Ratios, and Teachers Employed, Public and Private, Elementary and Secondary

School Year	Enrolments		Pupil/Teacher Ratio			Teachers Employed					
	Est 1	Est 2	Est 1	Est 2	Est 3	Est 1	Est 2	Est 3	Est 4	Est 5	Est 6
1971-2		5,806,050		21.35					272,895		
72		5,760,123		20.94					275,026		
73		5,690,472		20.75					274,123		
74		5,633,059		20.46					275,209		
75		5,594,885		20.19					277,079		
76		5,513,798		20.05					274,884		
77		5,410,546		19.89					271,993		
78		5,293,834		18.85					280,808		
79		5,184,387		18.62					278,301		
1980		5,106,300		18.56					275,035		
81		5,032,400		18.28					275,235		
82		4,995,800		18.32					272,584		
83		4,976,904		18.24					272,840		
1984		4,949,936	18.12	18.12	18.12	273,175	273,175	273,175	273,175	273,175	273,175
1985	4,947,812	4,947,593	18.0	18.00	18.00	274,878	274,878	274,878	274,878	274,878	274,878
86	4,946,773	4,946,105	18.0	17.95	17.9	274,821	275,586	276,356	274,820	275,549	276,318
87	4,947,535	4,946,200	18.0	17.90	17.8	274,863	276,399	277,951	274,788	276,324	277,876
88	4,943,440	4,941,347	18.0	17.85	17.7	274,636	276,943	279,290	274,519	276,826	279,172
89	4,954,131	4,947,644	18.0	17.80	17.6	275,230	278,322	281,484	274,869	277,957	281,116
1990	4,978,668	4,961,288	18.0	17.75	17.5	276,592	280,488	284,495	275,627	279,509	283,502
91	5,012,652	4,978,133	18.0	17.70	17.4	278,180	283,200	288,083	276,562	281,250	286,100
92	5,047,751	4,989,149	18.0	17.65	17.3	280,430	285,991	291,777	277,175	282,671	288,390
93	5,080,577	4,992,342	18.0	17.60	17.2	282,254	288,669	295,382	277,352	283,655	290,252
94	5,113,216	4,989,453	18.0	17.55	17.1	284,067	291,351	299,018	277,191	284,299	291,780
95	5,143,041	4,977,235	18.0	17.50	16.9	287,160	293,888	304,321	276,513	284,413	294,510
96	5,168,892	4,955,565	18.0	17.45	16.8	287,160	296,211	307,672	275,309	283,986	294,974
97	5,184,690	4,917,598	18.0	17.40	16.7	288,038	297,970	310,460	273,200	282,620	294,466
98	5,189,093	4,862,683	18.0	17.35	16.6	288,282	299,083	312,595	270,149	280,270	292,932
99	5,185,142	4,795,039	18.0	17.30	16.5	288,063	299,719	314,251	266,391	277,170	290,608
2000	5,174,939	4,717,150	18.0	17.25	16.4	287,496	299,996	315,545	262,063	273,457	287,631
01	5,158,558	4,629,964	18.0	17.20	16.3	286,586	299,916	316,475	257,220	269,184	284,046
02	5,132,364	4,534,212	18.0	17.15	16.2	285,131	299,263	316,812	251,900	264,385	279,889
03	5,097,581	4,435,642	18.0	17.10	16.1	283,199	298,104	316,619	246,424	259,394	275,505
04	5,056,142	4,336,680	18.0	17.05	16.0	280,097	296,547	316,008	240,926	254,350	271,042
05-06	5,010,269	4,239,380	18.0	17.00	16.0	278,348	294,721	313,141	235,521	249,375	264,961

Table 10. Historical and Projected Enrolments, Pupil/Teacher Ratios, and Teachers Employed, (Public Elementary and Secondary)

School Year	Enrolments		Pupil/Teacher Ratio			Teachers Employed					
	Est 1	Est 2	Est 1	Est 2	Est 3	Est 1	Est 2	Est 3	Est 4	Est 5	Est 6
1971-2	5,628,218			21.38				263,126			
72	5,570,251			21.02				264,985			
73	5,491,865			20.82				263,260			
74	5,416,366			20.56				263,507			
75	5,372,014			20.26				265,040			
76	5,284,220			20.12				262,630			
77	5,178,753			19.04				272,015			
78	5,059,008			18.88				267,911			
79	4,994,701			18.84				265,127			
1980	4,855,766			18.56				261,540			
81	4,770,295			18.26				261,122			
82	4,726,558			18.30				258,010			
83	4,700,448			18.21				258,028			
1984	4,682,724	4,696,915	18.12	18.12	18.12	258,428	258,428	258,428	259,211	259,212	259,212
85	4,672,059	4,672,059	18.00	18.00	18.00	259,559	259,559	259,559	259,559	259,559	259,559
86	4,654,173	4,654,173	18.00	17.95	17.9	258,565	259,285	260,010	258,565	259,285	260,010
87	4,636,530	4,636,530	18.00	17.90	17.8	257,585	259,024	260,479	257,585	259,024	260,479
88	4,626,027	4,626,027	18.00	17.85	17.7	257,002	259,161	261,357	257,002	259,161	261,357
89	4,615,850	4,615,850	18.00	17.80	17.6	256,759	259,644	262,594	256,436	259,317	262,264
1990	4,630,173	4,614,905	18.00	17.75	17.5	257,232	260,855	264,581	256,384	259,995	263,709
91	4,647,762	4,613,647	18.00	17.70	17.4	258,209	262,585	267,113	256,314	260,658	265,152
92	4,665,965	4,608,156	18.00	17.65	17.3	259,220	264,361	269,709	256,009	261,085	266,367
93	4,679,934	4,594,055	18.00	17.60	17.2	259,936	265,905	272,089	255,225	261,026	267,096
94	4,691,987	4,574,107	18.00	17.55	17.1	260,666	267,350	274,385	254,117	260,633	267,492
95	4,699,556	4,545,378	18.00	17.50	17.0	261,086	268,546	276,444	252,521	259,736	267,375
96	4,701,905	4,507,901	18.00	17.45	16.9	261,217	269,450	278,219	250,439	258,332	266,740
97	4,694,460	4,457,504	18.00	17.40	16.8	260,803	269,797	279,432	247,639	256,178	265,328
98	4,677,479	4,395,256	18.00	17.35	16.7	259,860	269,595	280,089	244,181	253,329	263,189
99	4,653,370	4,323,176	18.00	17.30	16.6	258,521	268,981	280,323	240,176	249,895	260,432
2000	4,622,449	4,243,419	18.00	17.25	16.5	256,803	267,968	280,148	235,746	245,995	257,177
01	4,585,243	4,158,311	18.00	17.20	16.4	254,736	266,584	279,588	231,017	241,763	253,556
02	4,541,152	4,069,646	18.00	17.15	16.3	252,286	264,790	278,598	226,091	237,297	249,672
03	4,491,130	3,990,802	18.00	17.10	16.2	249,507	262,639	277,236	221,711	233,380	246,346
04	4,437,095	3,905,596	18.00	17.05	16.1	246,505	260,240	275,596	216,978	229,067	242,584
05	4,380,979	3,829,369	18.00	17.00	16.0	243,388	257,705	273,811	212,743	225,257	239,336

Diagram 4. Actual and Projected Elementary and Secondary School Teachers in Canada (including Private Schools)

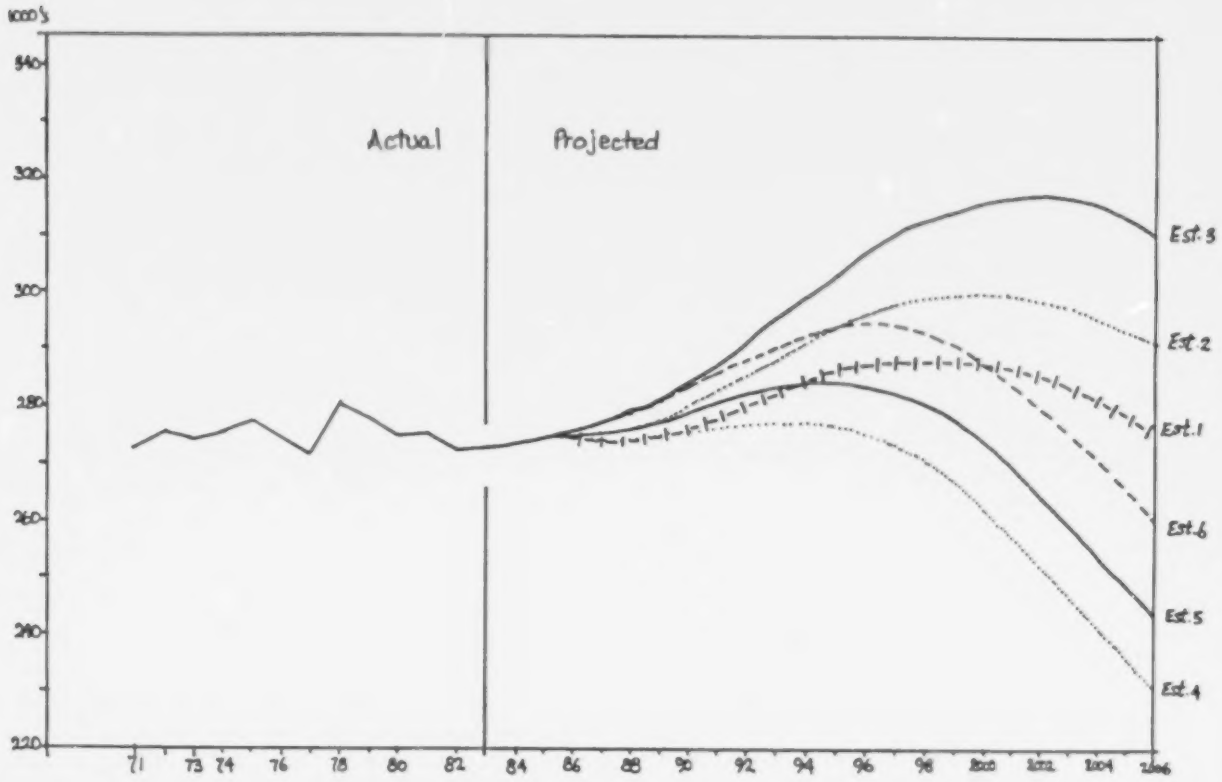
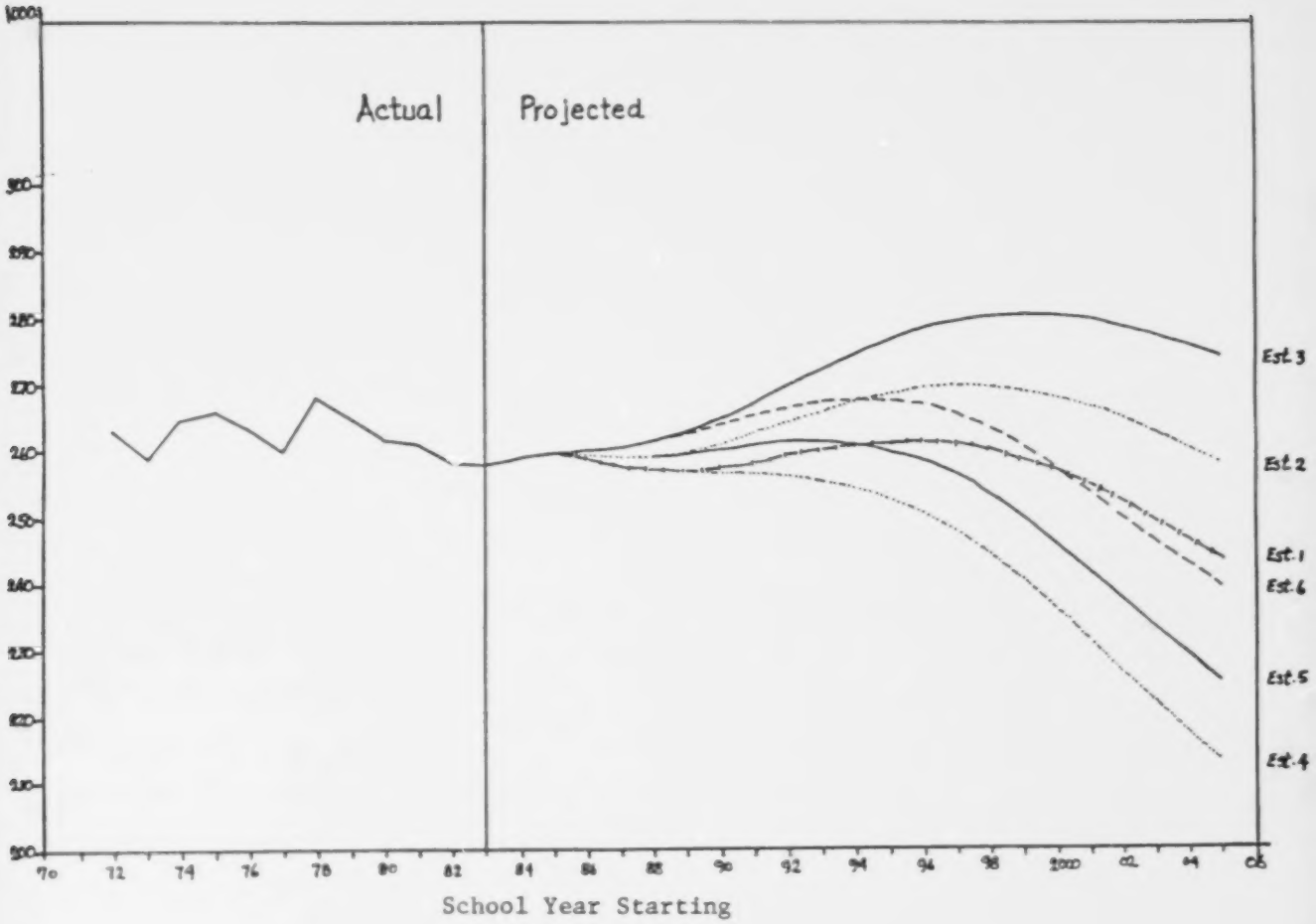


Diagram 5. Actual and Projected Elementary and Secondary School Teachers in Canada (Publicly Supported Schools Only)



We began this paper with the observation that teachers are getting older. That advancing age, plus some estimate of age-specific retirement rates, will allow us to project the rate at which currently employed teachers will leave the industry. Tables 11 and 12 present a pretty good picture of the aging of this population. Table 11 gives the average and median ages of male and female teachers. It is probable that by now the average age has passed the 40-year mark, and the median age either has or is about to pass that mark. Table 12 gives us a picture of the changing distribution of the teachers by age. The modal age for teachers was 25-29 until 1977-78, it was 30-34 until 1981-82, and it is now 35-39. In 1972-73, 29 per cent of employed teachers were over 40; in 1983-84, 42 per cent of them were. In 1972-73, 44 per cent were under 30. In 1983-84, 14 per cent were under 30. This changing age structure is presented pictorially in Diagram 6.

On the basis of projections of number of teachers by single year of age, and on the basis of the assumption that most withdrawals after age 54 are retirements (or deaths), we have projected retirements to the year 2005-06. Table 13 presents these projections for each year of age from 54 to 65+ for men and for women. The coefficient of retirement for each year of age is assumed to be the same each year as it was during the year 1983-84. (These projections are for public system teachers in all provinces and territories except Quebec.)

As more teachers move into the higher age groups, retirements increase in absolute numbers. Only 127 male teachers age 54 retired in 1984; there are projected to be 377 retirements of men age 54 in the peak year, 1998. There were 116 women age 54 who retired in 1984; there will be 387 retiring in the peak year, 2003.

Although most teachers retire well before the age of 64, that appears to be the modal age of retirement, and it is a more pronounced modal age for men than women. In 1984, 156 men aged 64 retired; that number should peak in 2001 at 547. In 1984, 154 women retired; there are projected to be 498 of them retiring in 2003.

Table 11. Average and Median Ages of Educators by Sex
1972-73 to 1983-84
Canada (Excluding Quebec)

Year	Average Age			Median Age		
	Male	Female	Total	Male	Female	Total
1972-73	35	34	35	32	30	31
1973-74	35	34	35	33	30	31
1974-75	35	35	35	33	30	32
1975-76	36	35	35	34	31	32
1976-77	36	35	36	34	32	33
1977-78	37	36	36	35	32	34
1978-79	37	36	37	35	33	34
1979-80	38	36	37	36	34	35
1980-81	38	37	37	37	34	36
1981-82	39	37	38	38	35	36
1982-83	39	38	38	38	36	37
1983-84	40	38	39	39	36	38

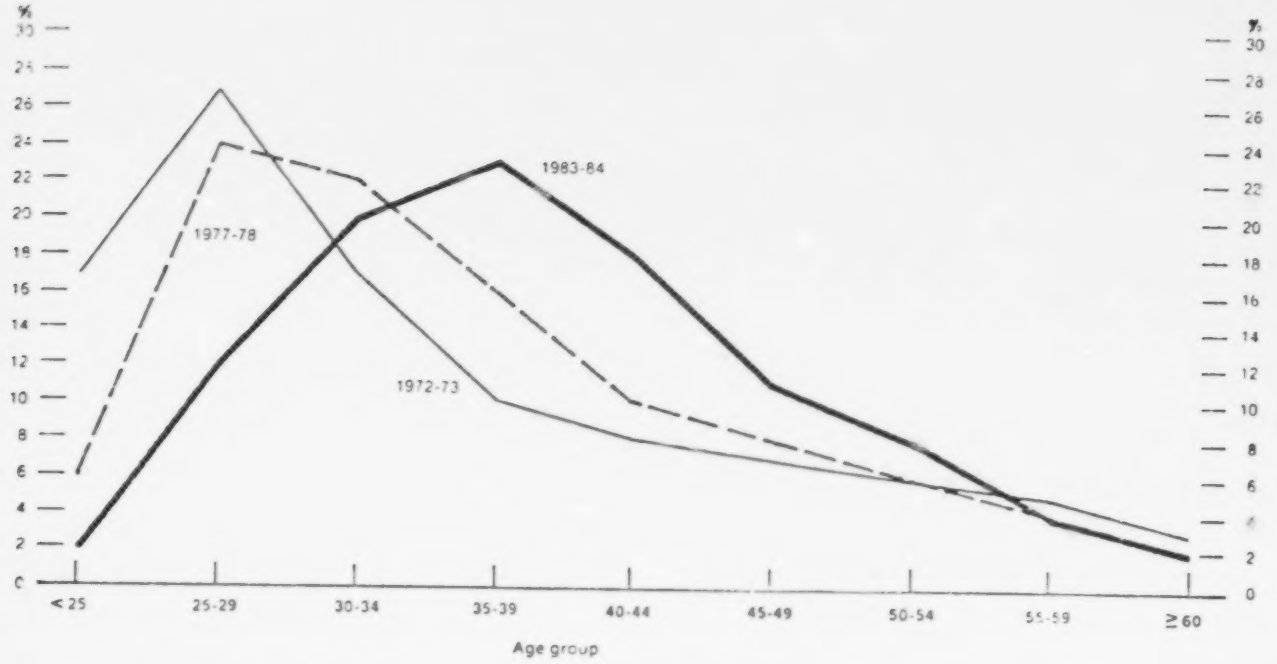
Taken from Canadian Teachers' Federation. Key Characteristics of Teachers in Public Elementary and Secondary Schools. The distribution of teachers uses Statistics Canada data.

Table 12. Percentage of Educators by Age Group
1972-73 to 1983-84
Canada (Excluding Quebec)

Year	24 and Under	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over	Not Reported	Total
1972-73	17	27	17	10	8	7	6	5	3	-	100
1973-74	15	27	18	11	8	7	6	5	3	-	100
1974-75	12	28	19	12	9	7	6	4	3	-	100
1975-76	10	28	20	13	9	7	6	4	3	-	100
1976-77	8	27	21	15	10	8	6	4	2	-	100
1977-78	6	24	22	16	10	8	6	4	2	-	100
1978-79	5	22	23	17	11	8	6	4	2	-	100
1979-80	4	19	24	18	12	9	7	4	2	-	100
1980-81	4	17	25	19	13	9	7	4	2	-	100
1981-82	4	15	23	20	15	9	7	4	2	-	100
1982-83	3	13	22	22	16	10	8	4	2	-	100
1983-84	2	12	20	23	17	11	8	4	2	-	100

Taken from Canadian Teachers' Federation. Key Characteristics of Teachers in Public Elementary and Secondary Schools. The distribution of teachers uses Statistics Canada data.

Diagram 6. Age Distribution of Elementary-Secondary Educators, 1972-73, 1977-78 and 1983-84*



*Adapted from diagram in Statistics Canada Catalogue No. 81-202.

Table 13. Projected Retirements by Single Year of Age, from Age 54 to Age 65+, 1984 to 2006

Year	Number Retiring by Age of Retirement												Total	Cumulative Total Retiring	Total Not Retired	Per Cent Not Retired*
	54	55	56	57	58	59	60	61	62	63	64	65+				
Males																
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88,988	100%
1984	127	150	130	115	139	149	144	91	63	72	156	105	1,440	1,440	87,548	98
1985	129	153	132	117	142	152	147	93	64	73	159	107	1,468	2,908	86,080	97
1986	141	167	144	128	154	165	160	101	70	80	174	116	1,600	4,508	84,480	95
1987	138	164	142	126	152	163	157	99	68	79	171	114	1,574	6,082	82,906	93
1988	151	180	155	138	166	178	172	109	75	86	187	125	1,723	7,805	81,183	91
1989	175	208	179	159	192	206	199	126	86	100	216	145	1,989	9,794	79,194	89
1990	197	234	202	179	216	231	224	141	97	112	243	163	2,240	12,034	76,954	86
1991	211	250	216	192	232	248	239	151	104	120	260	175	2,399	14,433	74,555	84
1992	248	294	254	225	272	291	282	178	122	141	306	205	2,820	17,253	71,735	81
1993	273	324	280	248	300	321	310	196	135	156	337	226	3,108	20,361	68,627	77
1994	302	359	310	275	332	355	343	217	149	172	373	250	3,439	23,800	65,188	73
1995	330	392	339	300	363	388	375	237	163	188	408	273	3,755	27,555	61,433	69
1996	344	409	354	313	378	405	391	247	170	196	425	285	3,919	31,474	57,514	65
1997	376	447	386	342	413	442	427	270	186	214	465	311	4,281	35,755	53,233	60
1998	377	448	387	343	415	444	429	271	187	215	466	312	4,294	40,049	48,939	55
1999	363	431	372	330	399	427	412	260	179	207	448	300	4,128	44,177	44,811	50
2000	432	514	444	393	475	509	491	311	214	246	534	358	4,921	49,098	39,890	45
2001	443	526	455	403	487	521	503	318	219	252	547	367	5,040	54,138	34,850	39
2002	389	462	399	354	427	457	442	279	192	221	480	322	4,424	58,562	30,426	34
2003	370	439	380	336	406	435	420	265	183	211	457	306	4,206	62,768	26,220	29
2004	330	391	338	300	362	388	374	237	163	188	407	273	3,750	66,518	22,470	25
2005	279	331	286	254	306	328	317	200	138	159	344	231	3,173	69,691	19,297	22
2006	246	293	253	224	271	290	280	177	122	140	304	204	2,805	72,496	16,492	19
Females																
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	103,140	100%
1984	116	135	121	131	153	204	165	109	88	81	154	61	1,518	1,518	101,622	99
1985	125	145	130	140	164	219	177	116	94	87	166	65	1,628	3,146	99,994	97
1986	124	144	129	139	163	217	175	115	93	86	164	65	1,615	4,761	98,379	95
1987	122	141	127	137	160	213	172	113	92	84	161	64	1,586	6,347	96,793	94
1988	131	152	136	147	172	229	185	122	99	91	174	68	1,706	8,053	95,087	92
1989	143	166	148	160	187	250	202	133	107	99	189	75	1,858	9,911	93,229	90
1990	155	180	161	174	204	271	219	144	117	107	205	81	2,018	11,929	91,211	88
1991	155	180	161	174	203	271	219	144	117	107	205	81	2,016	13,945	89,195	86
1992	182	212	190	204	239	319	258	170	137	126	242	95	2,374	16,319	86,821	84
1993	195	227	203	219	256	342	276	182	147	135	259	102	2,542	18,861	84,279	82
1994	210	244	218	235	276	367	297	195	158	145	278	110	2,734	21,595	81,545	79
1995	232	270	242	261	306	407	329	217	175	161	308	122	3,030	24,625	78,515	76
1996	255	297	266	287	336	447	362	238	192	177	339	134	3,329	27,954	75,186	73
1997	266	309	277	298	350	466	376	248	200	184	353	139	3,466	31,420	71,720	70
1998	260	302	271	292	342	455	368	242	196	180	345	136	3,390	34,810	68,330	66
1999	274	318	285	307	360	480	388	255	206	190	363	143	3,570	38,380	64,760	63
2000	344	400	359	387	453	603	488	321	260	239	457	180	4,491	42,871	60,269	58
2001	376	437	391	422	494	658	532	350	283	261	498	197	4,899	47,770	55,370	54
2002	382	444	398	429	502	669	541	356	288	265	507	200	4,979	52,749	50,391	49
2003	387	450	403	435	509	679	549	361	292	269	514	203	5,051	57,800	45,340	44
2004	375	436	391	421	493	657	531	350	283	260	498	196	4,893	62,693	40,447	39
2005	345	401	359	387	453	604	488	321	260	239	457	180	4,495	67,188	35,952	35
2006	321	313	334	360	421	561	454	399	242	222	425	168	4,179	71,367	31,773	31

Table 13. Projected Retirements by Single Year of Age, from Age 54 to Age 65+, 1984 to 2006 (cont'd)

Year	Number Retiring by Age of Retirement												Total	Cumulative Total Retiring	Total Not Retired	Per Cent Not Retired*
	54	55	56	57	58	59	60	61	62	63	64	65+				
								Total								
1983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	192,128	100%
1984	243	286	251	246	292	353	309	199	150	153	311	166	2,958	2,958	189,170	98
1985	254	298	262	257	306	370	323	209	158	160	325	172	3,096	6,054	186,074	97
1986	264	311	273	267	317	382	335	216	163	166	338	181	3,215	9,269	182,859	95
1987	260	306	269	262	312	376	329	213	160	163	332	178	3,160	12,429	179,699	94
1988	282	332	292	285	338	407	357	231	173	177	361	194	3,429	15,858	176,270	92
1989	317	373	328	319	379	455	400	258	194	198	405	219	3,847	19,705	172,423	90
1990	352	414	363	353	420	503	443	286	214	219	449	244	4,258	23,963	168,165	88
1991	365	430	377	365	435	519	458	295	221	227	466	255	4,415	28,378	163,750	85
1992	430	506	444	430	512	610	539	348	260	267	548	300	5,194	33,572	158,556	83
1993	468	551	483	467	556	663	586	378	282	291	596	328	5,650	39,222	152,906	80
1994	512	603	529	510	608	723	640	412	307	318	652	360	6,173	45,395	146,733	76
1995	562	662	581	561	668	795	704	454	338	349	716	395	6,785	52,180	139,948	73
1996	600	706	620	600	714	852	753	485	363	373	764	419	7,248	59,428	132,700	69
1997	642	756	663	641	763	908	804	518	386	399	817	450	7,747	67,175	124,953	65
1998	637	750	658	635	756	899	797	513	382	395	811	448	7,684	74,859	117,269	61
1999	637	749	658	637	759	906	800	516	386	397	811	444	7,698	82,557	109,571	57
2000	777	914	803	780	928	1,112	979	632	473	485	991	538	9,412	91,969	100,159	52
2001	819	963	846	825	981	1,179	1,035	668	502	513	1,046	563	9,939	101,908	90,220	47
2002	771	906	797	782	929	1,126	982	635	480	486	987	522	9,403	111,311	80,817	42
2003	757	889	783	771	915	1,113	969	626	475	479	971	509	9,257	120,568	71,560	37
2004	705	828	729	721	856	1,045	906	586	446	448	905	469	8,643	129,211	62,917	33
2005	624	732	645	641	759	932	805	521	398	398	801	411	7,668	136,879	55,249	29
2006	567	666	587	584	692	851	734	576	364	362	729	372	6,984	143,863	48,265	25

* Total not retired as per cent of total not retired in 1983.

Of more importance to our estimates of future job opportunities is the total erosion of the present stock of teachers. Of the 88,988 men employed in 1983-84, 50 per cent will have retired by 1999, and 81 per cent will have retired by 2006. Fifty percent of 103,140 women teachers employed in 1983-84 will have retired by 2002, and 69 per cent by 2006.

Diagram 7 shows this summation of retirements in total and for both sexes. The peak retirement year for men employed in 1983-84 should be 2001, and the peak year for women should be 2003. Diagram 8 shows the loss of the present stock of teachers to retirement over the years to 2004-05.

On the basis of what we are brave enough to claim we know about how many teachers will be employed each year to 2005-06, on what we project to be the terminations in the field, and on what we have estimated to be the propensities of employers to hire experienced teachers (re-entries), we are now prepared to project the demand for teacher employment, and especially the demand for new recruits to the profession.

Table 14 presents projected public-schools enrolment (estimate 1 from Table 10, the higher projection), the projected number of employed teachers (Estimate 2 from Table 10, the assumption of movement to a 17.0 pupil/teacher ratio and the higher enrolment projections), and projected terminations for the years 2005-06. (Projected terminations are the projected retirements from Table 13 plus a coefficient of other terminations based on observed trends.) New-employment demand for each year has been projected by adding (or subtracting) the difference in total employment from one year to the next to the number of terminations (or replacement demand). Retirement rates are presumed to be the same in Quebec as in the rest of Canada.

Because all teaching vacancies are assumed to be filled, we can say that the number of new employees demanded will equal the number of new employees supplied (this is, of course, to ignore the redundant would-be employees). The new employees demanded will, more often than not, be new employees at the board employing them but not people in their first jobs.

Diagram 7. Number of Teachers Retiring each year by sex, 1984-85 to 2006-07

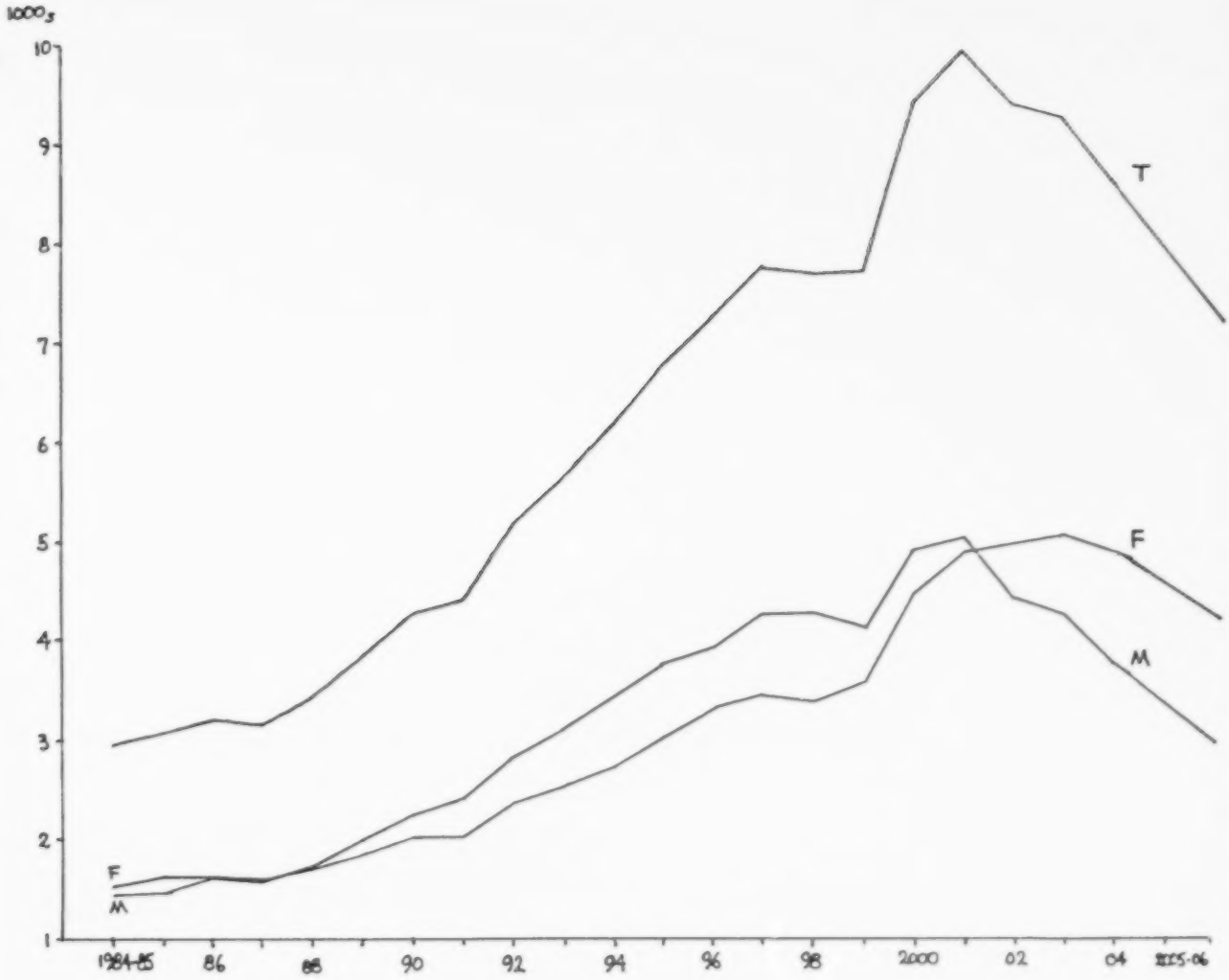


Diagram 8. Percentage of Male and Female Elementary and Secondary Teachers not Retiring 1984-85 to 2004-05 (1984-85 = 100%)

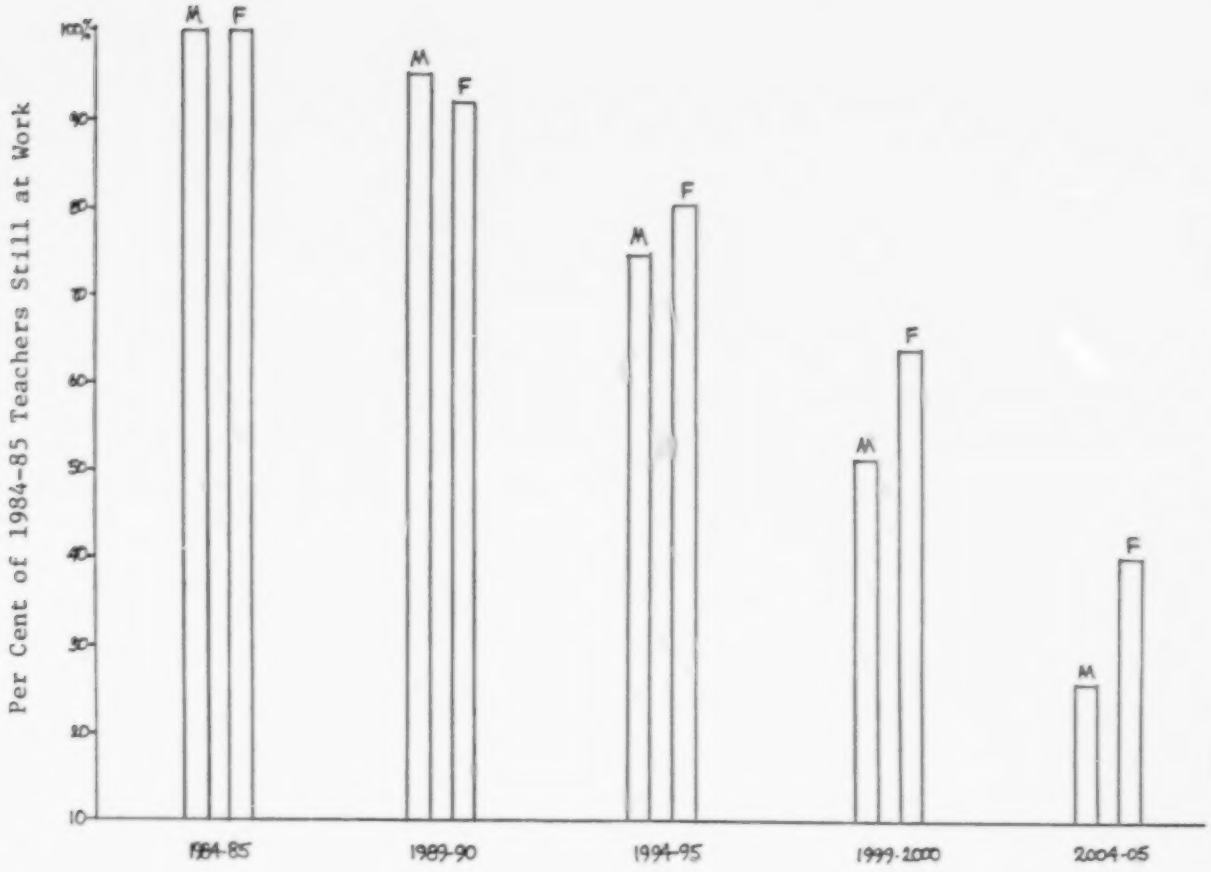


Table 14. Projected Numbers of Employed Teachers, Teacher Hirings, and Opportunities For New Teachers

School Year	Enrolment K-13	Employed Teachers	Demand: Expansion Hirings	Demand: Replacement Hirings	Demand: Replacement as % of Employed	Demand: Total Hired	Supply: Total Newly Employed[1]	Supply: Re-Entries	Supply: Re-Entries as % of Newly Employed	Supply: New Teachers[2]
1983	4,700,448	257,700			6.0					
84	4,682,724	258,428	+728	15,462	6.0	16,190	16,190	11,333	70.0	4,857
85	4,672,059	259,559	+1,131	15,506	6.0	16,637	16,637	11,646	70.0	4,991
86	4,654,173	259,285	-274	16,093	6.2	15,819	15,819	11,073	70.0	4,746
87	4,636,530	259,024	-261	16,854	6.5	16,593	16,593	11,615	70.0	4,978
88	4,626,027	259,161	+137	18,132	7.0	18,269	18,269	12,788	70.0	5,481
89	4,621,663	259,644	+483	19,437	7.5	19,920	19,920	13,546	68.0	6,374
1990	4,630,173	260,855	+1,211	19,925	7.7	21,136	21,136	13,949	66.0	7,187
91	4,647,762	262,585	+1,730	20,607	7.9	22,337	22,337	14,295	64.0	8,042
92	4,665,965	264,361	+1,776	21,006	8.0	22,782	22,782	14,124	62.0	8,658
93	4,679,934	265,905	+1,544	21,941	8.3	23,485	23,485	14,091	60.0	9,394
94	4,691,987	267,350	+1,445	22,867	8.6	24,312	24,312	14,587	60.0	9,725
95	4,699,556	268,546	+1,196	23,794	8.9	24,990	24,990	14,994	60.0	9,996
96	4,701,905	269,450	+904	24,169	9.0	25,075	25,075	15,045	60.0	10,030
97	4,694,460	269,797	+347	24,519	9.1	24,866	24,866	14,919	60.0	9,947
98	4,677,479	269,595	-202	24,821	9.2	24,619	24,619	14,771	60.0	9,848
99	4,653,370	268,981	-614	25,072	9.3	24,458	24,458	14,674	60.0	9,784
2000	4,622,449	267,968	-1,013	25,284	9.4	24,271	24,271	14,562	60.0	9,709
01	4,585,243	266,584	-1,384	25,456	9.5	24,072	24,072	14,443	60.0	9,629
02	4,541,152	264,790	-1,794	25,325	9.5	23,531	23,531	14,118	60.0	9,413
03	4,491,130	262,639	-2,151	25,155	9.5	23,004	23,004	13,802	60.0	9,202
04	4,437,095	260,240	-2,399	24,950	9.5	22,551	22,551	13,530	60.0	9,021
2005	4,380,979	257,705	-2,535	24,722	9.5	22,187	22,187	13,312	60.0	8,875

[1] Total number of teachers newly hired by their present employers
[2] Total number of teachers in their first teaching jobs. Some will have recently attained formal credentials, others will have been formally qualified for some years

Re-entries are assumed to fill 70 per cent of the openings for teachers in the years to 1987-88, and the ratio of re-entries to total places filled will decline to 60 per cent as retirements increase relative to other terminations. New recruits to teaching will fill the remainder of the openings. New teachers in this sense may be people just out of teacher training or people who got teaching credentials in earlier years but did not get jobs as teachers at that time.

The annual total employment demand is projected to peak at about 9.5 per cent of the employed teacher force in the early years of the new century. This will constitute a demand for new teachers of about 3.5 per cent to 4.0 per cent each year. In absolute numbers, the demand for new teachers should peak at about 10,000 in 1995-96.

This about completes our stock-taking for this profession.

As with any presentation of quantitative information, these diagrams and tables invite a variety of interpretations. In addition, of course, many of the projections reflect our opinions and expectations concerning the course of a number of demographic and organizational developments. Our readers are invited to construct some picture of their own as to the probable future of the schools of Canada and of the population of teachers and students within them.

We began this section with a brief discussion of the importance of inventory and capital stock changes to economic conditions generally, and the dynamics of particular industries. We will close the section with the observation that the likely future for the education industry is near constancy in the numbers employed, and a reduction in units of service, perhaps even "product" as one might choose to conceptualize it. This is to say that we have predicted rising real unit costs for the industry.

As with any industry that is not expected to increase in scale, education is not a primary area of employment for newcomers. How secure and how well paid those already working in the field are to be will be determined by the industrial relations their organizations maintain. It will be a matter of effective organization, influence, strategy, diplomacy and public relations.

IV. Concluding Comments: Again the Matter of More Young Women With Degrees

Throughout this century, and for that matter the century before it, the two most exciting demographic variables were birth rates and urbanization. These easily quantifiable aspects of human behaviour and conditions of existence captured the imagination of politicians, philosophers and every person with an active imagination about things social. The rates at which women have babies, and the rates at which families located in urban areas and did the things people do in cities, determined the economic progress of states and regions. These things also determined the war-making potential of nations, and the diffusion of tastes, habits and political notions through the population.

It was often asked by the curious, whether learnedly curious or just plain curious, "what will happen when women have fewer babies, stay home less, and get more education and social experience?" The answers are coming in now every day. One of the answers is that they started behaving more like men in regard to their work, their economic interests, and their occupational expectations. In very short time, we approximately doubled the numbers of people who think they are entitled to the advantages and rewards that go to the well-educated workers. Potentially, we doubled the numbers of doctors, lawyers, school teachers, police constables and the numbers in every other calling. It is probable that this will make us richer and happier in the long-run; maybe it is already doing that.

We would have been fools, though, to suppose that this would not be a difficult new reality to adjust to. And as with all difficulties, this one is not evenly distributed across the population. It is likely the case that women, with their new credentials and new expectations, are causing more problems for the education business than for most others. Most of the people who feel the consequences of these problems for the teaching business are, of course, women.

Not so long ago, about all a woman had to do to get a pretty good paying job was get a degree and become a teacher. It was also the case that this was the only way most women could get a well paying job. Men could do this too, of course, but for many of them it was only one of a number of routes to a well paying job. It was easier for men, then, to accept the fact that the period of expansion in the education field was passing.

Table 15 presents some information pertinent to the behaviour of men and women as it bears upon the supply of would-be teachers. Between 1960-61 and 1976-77, the production of bachelor degrees increased 4.4 fold, the production of first degrees in education increased 5.8 times. The number of first degrees in education increased 3.3 times for men. Note, however, that the number of education degrees obtained by men had been larger in 1971-72; it was then 3.6 times what it had been in 1960-61. The number of education degrees that women got in 1976-77 was 9.9 times what it had been in 1960-61.

In 1983-84, women got 9424 degrees in education, 87.1 per cent of what they got in 1976-77. In that year men got 3420 degrees in education, 52.9 per cent of what they got in the peak year reported here, 1971-72. In large measure, men have accepted the idea that there are not many jobs in teaching, women have not. Or, perhaps, women have only decided that there are not better opportunities for them elsewhere.

Regardless of what was happening in education, something else of more importance was happening; women became the recipients of the majority of bachelor degrees by 1981-82. The number of women graduates in 1983-84, minus the number who got education degrees, was greater than the number of men and women who got degrees in 1961-62, and it should be noted that the overwhelming majority of women were not getting degrees in education. The number who did get degrees in education in 1983-84 was only 20.6 per cent of the total number of bachelor degrees. About 80 per cent of women graduates were not making themselves part of the contest for teaching jobs.

Table 15 contains some projections for the quinquinnial years to 2006. These projections are based on the assumptions that participation rates at university will be constant, and education degrees will be a constant percentage of total bachelor degrees. In the year 2006, women getting degrees in education will approximately equal the projected number (Table 14) of new teachers to be hired that year. Women plus men getting education degrees will yield about 3,000 redundant graduates.

The situation facing both men and women in the teaching business is the challenge from the large number of would-be new teachers, mainly women. Diagram 9 pictures the structure of the situation that working teachers are striving to maintain. It is a situation characterized by declining enrolments and constant employment. More correctly, when enrolments were increasing rapidly, so did the number of teachers employed. The number of teachers employed has not declined along with enrolments, however.

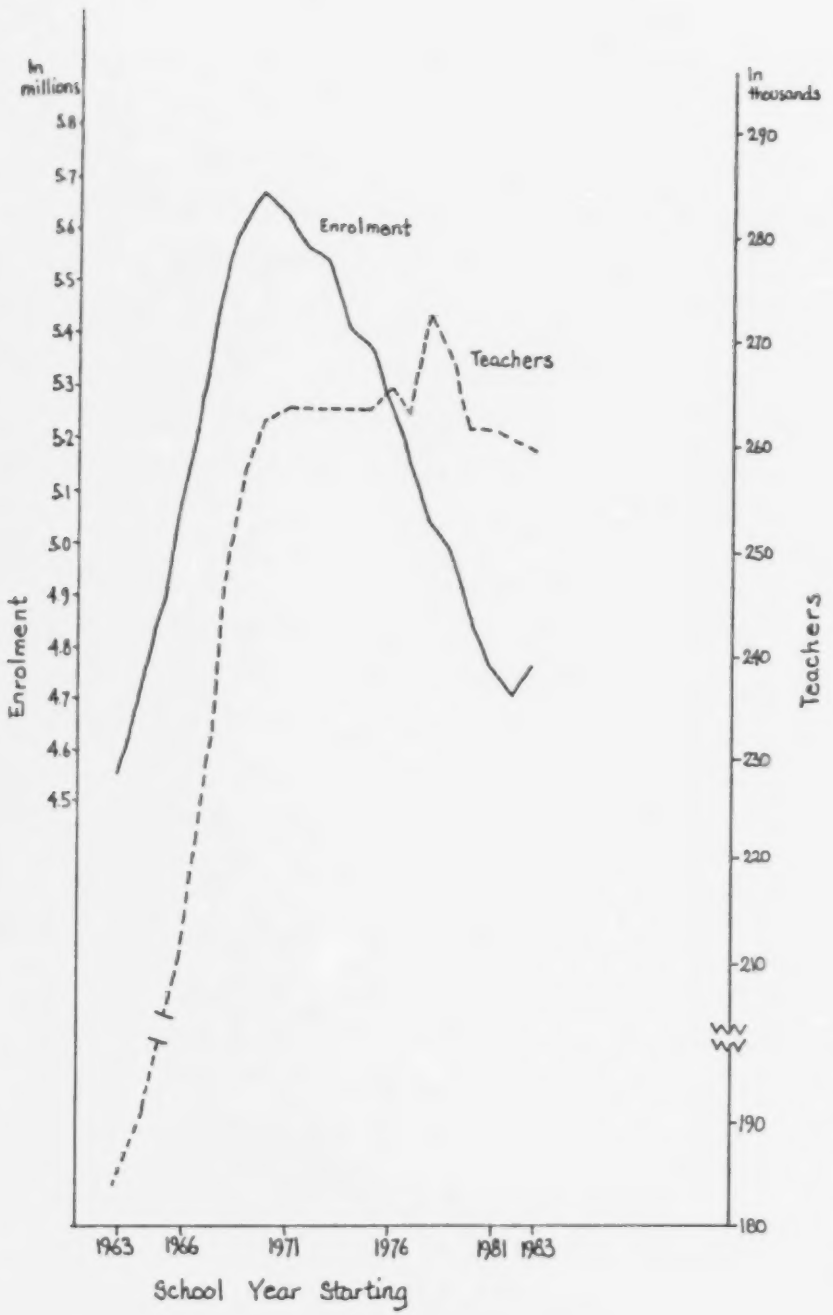
To have maintained this situation through the 1970s was an industrial relations accomplishment worthy of note. To maintain this situation through the rest of this century will be an organizational, industrial-relations achievement of even greater magnitude. It will be achieved with a bit less difficulty if young women will give up the notion that teaching is a likely way to a well-paying job in the late 20th century.

Table 15. Bachelor's Degrees and First Degrees in Education, Historical and Projected, Canada

	Women		Men		Total	
Academic Year	Bachelor Degrees	Education Degrees	Bachelor Degrees	Education Degrees	Bachelor Degrees	Education Degrees
1960-61	5,108	1,092	14,689	1,793	19,797	2,885
1961-62	6,270	1,378	16,566	2,047	22,836	3,425
1966-67	14,729	3,477	28,498	3,559	43,227	7,036
1971-72	28,582	8,205	43,962	6,460	72,564	14,665
1976-77	41,635	10,816	45,721	6,005	87,356	16,821
1981-82	42,815	9,975	42,112	3,570	84,927	13,545
1983-84	45,805	9,424 (20.6%)	43,977	3,420 (7.8%)	89,782	12,844
1991-92	40,808	8,569	39,192	3,056	80,000	11,625
1996-97	39,774	8,352	38,199	2,979	77,973	11,331
2001-02	41,445	8,703	39,804	3,104	81,249	11,807
2006-07	41,602	8,736	39,954	3,116	81,556	11,852

Projection Assumptions: participation rates for both sexes will remain at the levels of 1983-84; education first degrees will remain the same portion of bachelor's degrees as in 1983-84.

Diagram 9. Growth and Decline of Public School Enrolment and Teachers in Canada



AGING WORKERS, AGING TEACHERS: WHAT DO WE KNOW ABOUT THEM?

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Introduction

Your knowledge of the demographic perspectives, the picture of the working force -- the teaching profession especially -- for the next ten or fifteen years is certainly a confirmation of the à propos for the topic chosen for study during your seminar. It seems, for instance, that workers in the age group 35 to 55, who keep a stable position at about one-third of the labour force in 1975 and 1985, would represent almost half of that same force in the year 2000, in 15 years' time!

Notes: 1. This paper includes a report of research conducted in the Centre de Recherche en Administration des Organismes d'Éducation at the Université de Montréal. Other members of the centre are Luc Brunet, André Bourret, Marie-José Hamel, Pierrette Ste-Marie, Pierre St-Germain and Serge Vincent.

2. It is superfluous to state that the subject under discussion applies equally to men and women. We are aware that it is fastidious to read texts which refer only to the masculine gender. However, it is equally fastidious and sometimes irritating, as far as the reading process is concerned, to be obliged constantly to use the "he/she" or "his/her" formula. We therefore propose a compromise. Whenever possible, we shall use the impersonal terms "person" or "individual" which refer to both sexes. When the masculine pronoun or objective is used, however, the reader should take for granted that our concern is always for the person, whether male or female.

It is of the utmost importance that people in responsible positions take note of that fact, for if there are characteristics associated with that age group one must be ready to deal with them. It might then be useful:

1) to look at the determinants of aging, at least briefly, as I plan to do.
2) to be informed on what research has established in studying older workers. What are the myths and what are the realities? This will be dealt with by reviewing some of the most outstanding research conducted in the last few years.
3) and to know what has been found by a group working on mid-life and mid-career among school principals and teachers. This third point will be covered by communicating the preliminary results of work conducted at the "Centre de recherche en administration des organismes d'éducation" of l'Université de Montréal.

It is particularly important for teachers' groups to be sensitive on those subjects, for a few factors are specific to the situation of Canadian teachers. For if the reasons exist in other fields or countries they, I think, present a more acute intensity in this country, particularly in some provinces.

The rapid growth of the school systems in the early sixties forced school administrators to hire unusual numbers of teachers, in most cases people in their early twenties. This created the beginning of a very "unnatural distribution" of school staffs, one which doesn't have regular cohorts of entries and retirements plus a modest regular growth. Because as soon as these five or so years of very unusual growth went, we were pushed by an extremely severe decrease in the birth rate. It produced a situation where school boards were reduced to less than half their sizes in less than ten years in many instances. That meant that for most of the seventies no new staff were hired. The cohort of teachers hired in the early sixties are now themselves living through their forties and they are to be a large part of the staff of our school systems for the rest of this century.

Therefore if there are specific problems for people living their mid-life and if workers in their forties present specific features, one must be aware of those problems and features if one is to deal with a teaching profession in this age group.

Determinants of Aging

We must first explain the precise meaning we attach to the concept of age. The word age may cover several more or less complementary and interactive concepts. Chronological age represents longevity, biological age indicates the individual's position in his life span, psychological age refers to a person's capacity for adjustment, and lastly, social age may be a composite index describing a person's performance in his social roles. Birren suggests that in this hierarchy of concepts, chronological age underlies them all:

> In an expanding inclusiveness each index of aging described embraces the previous one but adds new aspects as well, chronological age being relevant to them all. (1968, p.548)

For the purposes of the present paper I have adopted the chronological sense without denying that the social or psychological aspects must be considered. Our concern here is with the general meaning of what age 40, for example, normally represents, primarily from a chronological point of view, but necessarily implying certain psychological states experienced in a particular social environment.

None of us would deny that aging is changing and, in some cases, losing something. None of us would doubt that one's wants, reactions or feelings are different at forty than they were at twenty. This of course we generally believe for others, but much less for ourselves in many respects! Generally speaking, common sense tells us the sources of age related differences.

There are differences related to the chronological age as well as to the biological one which can be observed readily: being in one's teens, having reached menopause....

There are differences related to, determined by, or caused by the capacity an individual has to adapt to situations.

There are differences caused by the social environment a person lives in. Somebody raised during the great depression doesn't view life the same way children of the Flower Power era view it generally. Members of the same cohort may be very similar to each other in terms of the songs they remember and the events they shared.

As Birren pointed out, an individual represents the cumulative effect of these, different, interactive concepts. One of the views generally agreed upon is that if an individual matures or lives at about the "same" "normal" rhythm for all those aspects, that individual will be well adjusted. Discrepancies, felt or real, will result in problems personally or socially.

Aging is thus related to some multiple factors which either cause it, accompany it or are its effects: some of them are quite objective, others totally subjective. Some are physically obvious while others are myths having nothing to do with aging.

This is why it would be so useful to go through the research which has been conducted on aging, especially on aging workers, to try to cut between myth and reality.

Research on Older Workers

It seems convenient for the present paper to summarize some of the research on older workers under two headings: Psychology of Older Workers, and Work Behavior of Older Workers. These are more or less the main divisions of that extensive review of research conducted by Doering et al., and published under the title The Aging Worker. For each of the topics the main findings they arrived at will be presented.*

*The recently released (1983) book by Doering, Rhodes and Shuster, The Aging Worker, is the main source of reference for this part of the paper. The authors' findings are, for the most part, quoted word for word.

Psychological characteristics

Values, needs, and attitudes are believed to be very sensitive factors in a worker's contribution to his job. They also represent sources of misconception about mid-age workers.

Values

Older workers are, for instance, thought to be more work-oriented than younger workers. Research examining age and work values is sparse. For only one value -- belief in the work ethic -- are there sufficient studies to begin to draw any conclusions, but here results were mixed. In some studies workers 45 to 54 expressed some difference in being more inclined to work even if they were made free of money needs. And in another study they were found to place less emphasis on self expression, extrinsic rewards and intrinsic rewards.

Needs

Several studies have used Maslow's need classification. In most of these it was found that the importance of needs for security and affiliation increased with age while the importance of self-actualization decreased. No difference was found in needs for self-esteem and autonomy. It would appear that age-related differences in job preferences and need importance are not generational or cohort differences. First, there are only modest age-related differences in what people regard as important in their work. Moreover, values relating to the enrichment and meaningfulness of work, which were thought to be of great importance to the young, showed minimal age differences.

For the most part expectations remain constant with age, and in some cases there appears to be an escalation of demands. An alternate aging phenomenon that is consistent with the findings is a life-cycle/career stage explanation. According to this explanation, both extra-work and work factors will have an influence on preferences for job characteristics, and the age differences that do exist reflect changes in the pattern of need as one moves through the life cycle.

Attitudes

Four aspects of work attitudes were presented: job satisfaction, job involvement, internal work motivation, and organizational commitment. There is overwhelming evidence that overall job satisfaction is positively associated with age. That is, older employees in general report greater satisfaction with their jobs than do younger employees. These positive results are not as consistent when females are studied separately.

It appears that age is related, albeit weakly, to job involvement. However, characteristics of the job situation and psychological characteristics of the worker appear to be more important influences on job involvement than age.

A positive association was found between age and internal work motivation in all samples except one. It must be emphasized, however, that the relationship was weak.

While bivariate studies support a positive relationship between age and organizational commitment, results of multivariate studies only weakly support such a relationship. As the individual ages, he is bound more tightly to the organization, for example through pension plans and seniority rights. Furthermore, opportunities for interorganizational mobility are reduced with age, as other organizations are reluctant to provide incentives necessary to lure away the older worker. One would then easily understand that there is strong evidence suggesting that older workers are less likely to have an intention of leaving the organization than younger workers.

Conclusions

Psychological characteristics of the older worker have been examined in considerable detail. More than sixty empirical studies were reviewed. Important findings are highlighted below:

- The existence of generational differences in values between older and younger workers is not clearly supported by the literature.

- Differences do exist in the needs and preferences of older and younger workers. In particular, older workers have greater needs for security and affiliation and lower needs for self-actualization than do younger workers. These differences appear to be related to career stage and life-cycle influences, as opposed to cohort membership.

- Older workers have consistently expressed greater overall satisfaction than younger workers. There is some indication that satisfaction with work itself (also consistently higher for older workers) is the major influence on the higher levels of expressed job satisfaction.

- There are no consistent differences found between older and younger workers with regard to satisfaction with pay, promotion, supervision, and co-workers. Some evidence suggests that organization-specific factors are more important in explaining these facets of job satisfaction than individual difference variables.

- Older workers report higher levels of internal work motivation and job involvement than younger workers.

- Age and organizational commitment have been found to be positively related.

- Older workers are less likely than younger workers to have the intention of leaving the organization.

While there is considerable evidence showing the existence of age-related differences in psychological characteristics, the major weakness of the research is that it does not enable us to understand why these relationships exist.

Work behavior of older workers

Five aspects of research on work behavior have been reviewed: performance, absenteeism, turnover, accidents, and compensation.

Performance

The evidence on the age-performance relationship is clearly mixed, but strong evidence is also absent to support the generally held negative belief about older worker performance. It is possible that level of motivation, self-reliance, and recognition, plus the workplace climate itself, may influence performance with age. It also seems plausible that age differences in performance depend on the nature of the demands of the job.

Absenteeism

The fact that age and absence are related is not nearly so important as understanding why they are related. For each of the major findings, an attempt is made to identify the physiological and psychological determinants of absence which are associated with aging.

The finding with the greatest empirical support is that older male employees generally have lower rates of avoidable absence than younger male employees. The avoidable absence measure is viewed as an indicator of attendance motivation and reflects attitude toward work. The higher rates of unavoidable absence among older male workers that have been found in some instances may be associated with several factors. First, the relationship may be a function of deteriorating health and the onset of chronic illness associated with aging. Second, older workers when injured usually have a longer recovery period than younger workers.

Turnover

Existing evidence clearly suggests that older workers are less likely to leave an organization than younger workers. The probability of finding no acceptable alternative is indeed related to the decision.

Workplace Accidents

Studies based on massed data generally report that older workers are less likely to incur accidents than younger workers. However, the mixed results obtained when samples are drawn from single plants or narrow occupational groups serve as a caution to making blanket generalizations

about age-related differences in accident occurrence. In fact, the evidence suggests that there are different determinants of accident occurrence in younger and older workers. While inexperience and a possible lack of caution seem to be associated with accidents among the younger workers, the decline in physiological functioning, such as sensorimotor response, is more salient for the older worker. Age-related differences reported in the nature and causes of injuries also suggest differential causation for older and younger workers. Finally, at least one explanation for the negative association between age and accidents is that older workers who are less physically capable of meeting job demands leave physically demanding and hazardous jobs, and the higher accident occurrence among younger workers merely reflects their greater exposure to hazard.

Compensation

The finding that older workers earn more than younger workers can hardly be considered a significant one, nor can the fact that earnings are influenced by education, nationality, race, parents' status, and a variety of other demographic factors. It has however been shown that as workers age, the male-female earnings differences increase.

Older workers prefer increased retirement, medical and life insurance benefits. At the same time, their preference for pay, additional vacations, and a shorter work week declines.

The evidence from the studies on pay preferences and pay for performance suggests that pay is less important to older employees than it is to younger employees. Moreover, older workers are less likely to believe that an expanded level of performance will lead to greater rewards.

However, the better designed studies have found no relationship between age and pay satisfaction. The diverse results would suggest that the relationship between age and pay satisfaction depends on the particular organization, and organizational policies regarding pay.

Conclusions

Behaviors of the older worker have been examined in considerable detail. Some important findings are highlighted below.

- The performance of older workers is not necessarily either better or worse than that of younger workers. Other factors such as level of motivation, self-reliance, recognition, workplace climate, experience, and job demands may influence performance with age.

- Older workers are less likely than younger workers to leave an organization. Preliminary evidence suggests that higher overall job satisfaction and a lower estimate of the probability of finding an acceptable alternative account for these findings.

- Older males generally have lower rates of avoidable absence than younger male employees. However, in some instances older males have been found to have higher rates of unavoidable absence.

- Older workers have generally been found to have lower rates of accidents than younger workers. Important differences exist in causes of accidents for older and younger workers.

- Older workers, once injured, take longer to recuperate from accidents than younger workers and are more likely to have fatal accidents or to suffer a permanent disability.

- Older workers earn more than younger workers.

- Older workers prefer increased retirement, medical and life insurance benefits. At the same time, their preference for pay and time away from work declines.

- There is mixed evidence on whether older workers are more or less satisfied with pay than younger workers.

- Older workers are less likely to be motivated by pay for performance systems.

Summary

There is no supportive evidence to sustain the belief of differences in values between older workers and younger ones.

Older workers have a greater need for security and affiliation. They have consistently expressed greater job satisfaction than younger workers. Older workers report higher levels of internal work motivation. They are also less likely to leave the organization.

Their performance is neither better nor worse than that of younger workers. They have generally lower rates of avoidable absences. They are less often injured, but when they are they take longer to recuperate.

One cannot help but feel like the authors of The Aging Worker, after they had been through that tremendous amount of research:

> ... research indicates that the job attitudes and work behaviors of older workers are in general congruent with effective organizational functioning. However, it must be emphasized that age-related differences seldom account for more than 10 percent of the variance in any particular attitude or behavior. Hence, personnel decisions should be based on individual differences rather than age differences per se. (p.81)

Research in Education

Statistics taken from socio-demographic studies show clearly that the work force is aging in general. For those working in education that reality is even more striking: Quebec school principals, for instance, averaged over 46 years of age in 1984 and teachers in most school boards of the province reach that average almost everywhere.

Who are these people in their "forties"? Is it feasible to determine their psycho-social characteristics? Which types of relationships are they most likely to prefer with their working milieu: colleagues, dependents, students, authorities?

Research by D. Levinson, G. Vaillant, H. Levinson and E. Schein, among others, has identified certain characteristics specific to this period of life. A reading of their work suggests that for some individuals, this stage in their life is the most propitious moment of their personal development to permit maximum performance. For others, the opposite may be true.

Some authors have noted that behavior at work cannot be explained without reference to an indispensable explanatory variable: a person's age. It is even maintained that age differences alone can explain certain behavioral differences.

We believe that administrators, as well as management, instructors and counsellors, should certainly be aware of the characteristics of this stage in human development and its possible impact on work behavior. No better testimony can be found to support this idea than that of Harry Levinson himself, in Executive Stress (1964):

> Organizations must take the middle-age period seriously in their thinking, planning and programming...part of every supervisory and appraisal counseling should be devoted to some of the issues and concerns of this state...Executive or managerial training programs for men over thirty-five should have a different slant from those for men under thirty-five...(they) should include the opportunity for them to recognize, understand and accept their uniquely human role. (pp. 280-282)

The Problem

The aim of the present study was to see whether any possible connections might emerge from a comparison of how school personnel, school principals in particular, perceive certain aspects of their professional

life and how they perceive mid-life phenomena* in general, as well as the way in which they experience these phenomena.

We have thus tried to answer the following three questions:

1. What perception do school principals have of certain mid-life characteristics as noted in the population at large?

2. How do they perceive themselves in relation to these characteristics?

3. What is their perception of their professional life?

Methodology

From the mid-life literature the main characteristics of this period were identified. For each, a proposition was formulated. In addition, a series of factors identified in previous research as motivators in the accession to executive positions was included. Lastly, from certain studies on job satisfaction, we examined the sections which attempted to describe self-perception of work performance.

A questionnaire grouping the elements of these three components was prepared. Francophone school principals in Québec were chosen as our first research universe. The questionnaire was sent to all members of the school principals' federation. At the present time we are adapting our instrument for other groups in the field of education as well as in others: private enterprise and the public sector, French and English, inside and outside Québec. One of the groups we are working with is public school teachers. We have already tested our adapted instrument in a regional school board.

Synthesis of the Relevant Theory

It might be said, based on the model proposed by Getzels and

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* Mid-life (middle age, maturity, etc.) represents that part of life which, according to the authors, can vary from 35 to 55, depending on the individual. For some people, it will be from 35 to 40, whereas for others from 40 to 50, or 45 to 55, plus or minus a few years.

Guba to explain behavior noted in individuals in an organization, that the level of the individual's satisfaction of needs is recognized as the basic element leading to the latter's participation in the realization of the organization's objectives. Others have conducted in-depth studies on some aspects of that same field of human behavior: Maslow, for instance, by ranking the individual's needs in five levels to be satisfied in a certain order, or Herzberg by classifying those needs as hygiene factors and motivation factors.

Without rejecting these approaches but, on the contrary, in order to perfect them, certain researchers have suggested that, to evaluate motivation and productivity, greater attention should be paid to the importance of the different needs in relation to the individual's age and role (Hall, Nougaim, 1968 and Boisvert et al, 1981). For this purpose, we have sought guidance in, among others, the work of H. Levinson (1974), Neugarten (1976), D. Levinson (1978) and Schein (1978).

From an organizational point of view, Harry Levinson, in Executive Stress (1964), describes the problems of the mature manager. He notes that:

> For most men, attainment of executive rank coincides with the onset of middle age, that vast gulf which begins about thirty-five and endures until a man has come to terms with himself.... It is the peak time of personal expansion, when a man lives most fully the combined multiple dimension of his life ... Behind the flowering of middle age, a critical physical and psychological turnaround process is occurring. This is reflected in indexes of health ... This period is essentially a mourning experience. (pp. 265-278)

Bernice Neugarten introduces us to people at mid-life controlling society, maintaining norms and making decisions. The disparity between the development of their career and that of their life makes them aware of their aging. Many will devote more energy to their career, many will show signs of distress.

We might take as a relatively complete description of the characteristics of the middle-aged executive that proposed by Daniel Levinson in The Seasons of a Man's Life (1978). The 40-year-old executive (35-40) is

experiencing the mid stages of the seasons of life: Settling Down (33-40), Middle Transition (40-55) and Entering Middle Adulthood (45-50). Levinson summarizes the main characteristics of this executive's life at three levels: personal, professional and relational.

The four groups of potential problems of the mid-career as suggested by Schein in Career Dynamics (1978), complete the descriptions quoted above. He states that the specific problems relating to this stage of the individual's career come from:

1. The emotional realization of his own mortality and that time is limited;

2. The reemergence of the drives of adolescence and the reappearance of its conflicts;

3. A change in his relationship with his spouse and children;

4. Anxiety resulting from the realization of limited possibilities due to the decreasing number of professional options open to him.

From these works and some hundred others, we succeeded in identifying eight (8) groups of phenomena specific to mid-life and in working out a summary description of nearly forty characteristics specific to the phenomena composing these groups. The eight groups are: 1) sense of time, 2) appraisal, 3) maturity, 4) problems, 5) generativity, 6) profession, 7) society and 8) relationships. Table 1 shows the eight (8) groups of 38 phenomena that we have identified.

1. Sense of time: awareness that time is running out represents the phenomenon most unanimously accepted by researchers. Obvious physical changes, the realization of one's mortality, implying a confrontation with sickness and death, lead to the relativization of the notion of time.

Table 1. Grouping of Principal Mid-life Phenomena

Sense of time (1)	Physical change Sickness, death Finitude of life	Generativity (5)	Preparation of youth Durability, stability Ideal to pass on Mentor
Self-appraisal (2)	General evaluation Realism Shrinking possibilities Disappointment with life Solitude Distress Disappointment with achievements Social limits	Profession (6)	Value of success Self-actualization Limits of advancement Achievements
Maturity (3)	Self-control Second start Self-possession Authority and assurance Value system Experience Assertion Emotional fulfillment Self-consideration	Society (7)	Power Influence Involvement Competition
Problems (4)	Development crisis Problems of adolescence Depression	Relationships (8)	Friendship Love Friends

2. Self-appraisal: this relativization leads quite naturally to the second series of phenomena specific to self-appraisal: the person takes stock of his situation for his time is limited. He evaluates his achievements by comparing them to his ideal in his twenties, examines the possibilities for personal growth and professional advancement, seeks a way to make a fresh start while pondering on the meaning of life. He realizes that he lives alone, that he has much less power over the environment than it has over himself. Mid-life appears as the ideal period for evaluating one's development in relation to one's ideal; it is a phase of sometimes distressing realism.

3. Maturity: mid-life usually represents self-actualization: the individual feels in full possession of his means, his art, his profession; he has reached a certain plenitude. He realizes that he has attained self-mastery, authority and assurance, and has developed a value system which permits emotional fulfillment, a second start and new freedom.

4. Problems: the forties can also prove a moment of great disillusion, discouragement, even despair, if the self-evaluation seems too negative and the possibilities too limited. This period can generate problems which lead to a crisis often related to the unsolved problems of adolescence. For some people, evasion or the use of drugs seems to be the only possible solution.

5. Generativity: the individual does not want to disappear, he wants something of himself to survive: ideas, way of life... Usually, the first phases of the mid-life cycle lead the individual to want to perpetuate himself, in other words, to see that his ideas, values, and ideals survive. The person feels the need for continuity. To achieve this, he assumes support roles and acts as a mentor to younger people.

6. Profession: at mid-life, professional success is all the more important in that the individual becomes aware of the decreasing possibilities for advancement. Success assumes greater importance in the actualizing of self. In spite of the increasingly limited possibilities

for advancement, it is usually at this moment in life that the most outstanding professional achievements are to be seen.

7. Society: at mid-life, the individual possesses power but younger people aspire to it. He feels responsibility for the maintenance of social norms, and the desire to help younger people play their role in society. This leads to the strongly felt need for social involvement.

8. Relationships: personal relationships, even the most intimate, undergo profound changes. In special relationships, the individual re-examines his stance in relation to his entourage. He places greater value on friendship, reevaluates the relationships he has with others, including that with his spouse.

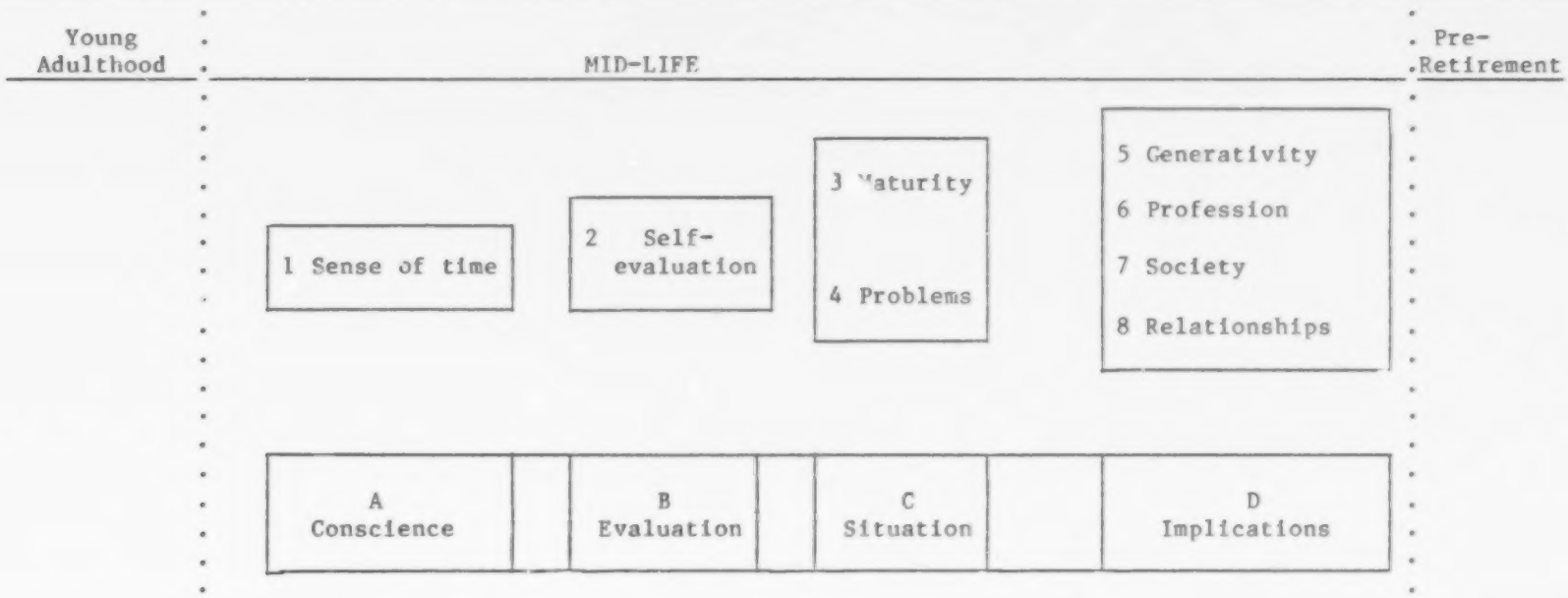
To summarize the above, the interaction between the eight groups may be presented diagrammatically as in Table 2.

Only for the first three periods of the table, A, B and C, is there a sequential order. It is obviously impossible to establish a general order as to the moment a phenomenon may appear or determine the significance of the interactions between the phenomena themselves.

The phenomena identified as specific to mid-life do not represent absolute laws, but observations made by researchers have enabled them to conclude that, in general, individuals in their forties faced specific problems and experienced characteristic situations.

As noted earlier, these propositions became a part of a questionnaire including, as well, other parts dealing with motivation to work and job satisfaction. In the next section some of the results from the analysis of the data collected from the school principals in Québec are presented with, for comparative purposes, the preliminary results we have obtained in our testing with a limited sample of 150 teachers.

Table 2. Proposition Explaining the Interaction Between the Eight Groups of Phenomena



(A) Sense of time is found to play the precipitating or shock role.

(B) Realization that the person will not have time to ... leads him to take stock of what he wanted to do compared with what he has done.

(C) This results in an image, a portrait, a factual statement of his personal situation.

(D) This process has consequences with regard to action involving the individual's life in his most intimate needs in both his professional and social role. It is a fresh start, a reorientation, the last sprint in the fulfillment of his life.

Some of the Findings

The results, as presented here, include all respondents regardless of their age group. It should be noted, however, that less than three per cent (3%) of the principals were younger than thirty-five years of age, with an average of forty-seven (47) years. Our small sample of teachers included fourteen per cent of respondents below thirty-six years of age, and averaged forty-two years (42).

Mid-life, first part of the questionnaire

School principals see themselves as being different from the population as a whole and that for almost every aspect studied. For ten of these aspects they even see themselves as opposite of where they see the population to be in general. Table 3 summarizes the findings for some of the propositions.

Table 3. Perception of the Population and Self Perception

At mid-life	Population	Self
. One needs a mentor	68% no (78)*	61% yes (50)*
. Parenthood becomes more important	62 no (90)	72 yes (44)
. It is a moment of crisis	54 yes (60)	73 no (71)
. Possibilities shrink	54 yes (50)	73 no (81)
. Unsolved problems reappear	52 yes (51)	64 no (65)
. Solitude becomes greater	63 yes (65)	52 no (50)
. Friendship acquires greater value	58 yes (59)	54 no (57)
. It is harder to make new friends	57 yes (55)	59 no (58)
. One has a set of values	55 no (72)	75 yes (48)
. One is controlled by the environment	63 yes (70)	61 no (56)
. Younger people are a threat	64 no (69)	85 no (78)
. Depression is more frequent	78 yes (69)	49 yes (45)

* Even if our data are very limited we give in parentheses the results of our testing with the teachers. It might be an indication of the future findings in our planned survey of teachers. On the other hand, due to the nature of your meeting it may be of special interest for you.

Teachers for most of the factors responded like the principals. There are, however, a few very noticeable exceptions: their view of the importance of parenthood for the population -- is it that they are closer to the parents? -- and the stability of one's own set of values.

A second general finding of our analysis of frequencies would make us believe that school principals concede a stronger role to other mid-life people than they see for themselves. For example, Table 4 presents five of the factors related to that idea.

Table 4. Mid-life and Social Role

At mid-life	Population	Self
. Professional success is more important	90% yes (94)*	79% yes (70)*
. One controls society	78 yes (79)	72 yes (62)
. One becomes socially involved	80 yes (72)	57 yes (57)
. One has the desire for continuity	87 yes (89)	77 yes (70)
. Professional achievements are many	88 yes (85)	83 yes (79)

* Teacher responses in parentheses

Teachers' responses are generally like those of principals, but it seems that they would see themselves as having an even less important social role.

And a last general impression related to the mid-life phenomena: school principals notice much more the obvious signs of aging for other people than for themselves. For instance, even if they see themselves as having to cope with the realities of death, sickness or degrading physical forms they think that it is much more of a problem for others. Wrinkles, and grey hair -- for what is left -- show on others, one doesn't notice the physical signs of aging on oneself that much!

Table 5. Mid-life Objective Signs

At mid-life	Population	Self
. Physically it shows	57% yes (59)*	29% yes (40)*
. Sickness and death are felt	79 yes (78)	67 yes (64)
. Time is running out	78 yes (81)	63 yes (71)

* Teacher responses in parentheses

As Table 5 shows, teachers seem to go in the same direction as the principals do, with some nuances in their appreciations.

Work, second part of the questionnaire

The second part of our questionnaire dealt with work. We asked our respondents why they had decided to become principals of schools and why they stay in their jobs. Table 6 summarizes their answers.

One can see great similarities in "aptitude" and "self realization" as motivating factors for teachers and principals. On the other hand, it seems that "challenge" and "rewarding work" as factors of motivation to stay are relatively very low with teachers. Would then "salary" be seen as a compensation?

When asked to rank the importance of six aspects of their lives the respondents said that work had either a very great importance or a great importance in the achievement of their life goals. Table 7 relates their answers. There are only very slight variations between the teachers' and the principals' responses.

Table 6. Work Motivation
(Four main factors recorded)

	Administrator	Teacher
A. I have decided to become an ... because of:		
. The challenge	93%	
. Self realization	91	(92)
. Aptitude	88	(88)
. Rewarding work	85	(72)
. Enriching social contacts		(63)
B. I stay because of:		
. Aptitude	92	(97)
. Self realization	87	(82)
. The challenge	77	
. Rewarding work	77	
. Salary		(75)
. Enriching social contacts		(69)

Table 7. Rating of Some Life Interests

Work	94%	(90)*
Family	84	(82)
Friends	60	(65)
Hobbies	49	(50)
Religion	39	(34)
Professional group	28	(24)

* Teacher responses in parentheses

We then asked for a self evaluation of one's own competence and performance as perceived by different persons in the work situation. Data indicate that principals think that teachers in their school consider them superior to other principals at the level of their competence (55%) and of their performance (62%). On the other hand, they think that their colleagues see them as their equals for both competence (61%) and performance (57%). They also think that their immediate superior evaluates their performance as superior to that of others (53%) and their competence as equal (49%) or superior (49%). Finally, they think that their competence equals that of their colleagues (50%) and that their performance is superior (54%). Table 8 summarizes the main results regarding that part of the data.

Table 8. Evaluation of Competence and Performance

School principals (teachers) think that:			
. Teachers view them as superior in regard to			
	competence	56%	(N.A.)
	performance	62	(N.A.)
. Colleagues view them as like them in regard to			
	competence	61%	(69)
	performance	57	(71)
. Their immediate superior views them as superior or equal to others in regard to		Superior	Equal
	competence	49% (46)	49% (53)
	performance	53 (49)	
. They themselves view their own competence as equal and their performance as superior		Superior	Equal
	competence		50% (63)
	performance	54% (61)	

Teachers think that their colleagues view them in a more positive way than the principals; at least ten per cent (10%) more of them do. They have about the same feeling about the views of their superiors regarding their competence and performance as do the principals. Finally, they seem to view their own competence and performance in a rather more positive way.

On being asked to give a global evaluation of their work, reacting to phrases applied to it, the principals said that "it is worth it" (84%), "it requires ability" (83%), "it represents a challenge" (79%), "it is respected" (78%), "it is satisfying" (77%), "it brings pride" (69%), and that "time goes fast" (91%). Table 9 gives a more complete picture of this part of our results.

Table 9. Assessing One's Own Work

My work is:	Yes %	? %	No %
frustrating	23 (33)*	20 (24)*	57 (43)*
respected	78 (58)	17 (31)	05 (11)
discouraging	08 (23)	20 (24)	72 (52)
satisfying	77 (57)	17 (27)	07 (16)
not enough responsibilities	17 (14)	15 (17)	87 (69)
brings pride	69 (55)	24 (28)	08 (17)
requires ability	83 (78)	13 (17)	05 (05)
not fit for me	05 (03)	12 (10)	83 (88)
time goes fast	91 (86)	07 (11)	03 (04)
it is worth it	84 (84)	14 (14)	02 (02)
not enough authority	16 (20)	26 (27)	58 (52)
requires a lot of experience	62 (65)	25 (28)	13 (07)
I may learn a lot	77 (69)	16 (26)	07 (07)
challenge	79 (59)	15 (23)	06 (17)
uncertain limits of authority	26 (18)	41 (59)	32 (23)

* Teacher responses in parentheses

Teachers when considering their work have a very different attitude toward it for many aspects. If they are like the principals in some respects: "it is worth it" (84%), "it requires ability" (78%), and "time goes fast" (86%), they have a much less favourable evaluation of their work in some very crucial respects: "it represents a challenge" (59%), "it is respected" (58%), "it is satisfying" (57%), "it brings pride" (55%).

If in the pursuit of our study these signs of a relatively negative view of their work by teachers are confirmed, one would have to do something about it. Because it seems it might be quite a serious problem.

We are in the process of analyzing all those frequencies more thoroughly and have already some of the data processed for correlation analysis and other procedures in order to exploit that very interesting source of data. There are already some very interesting trends taking form: between age groups, men and women, and between "views of middle age" and attitudes toward work.

On the other hand, other studies are being completed with French administrators and with a group of teachers in Québec. We are also in the process of developing the same kinds of studies for school superintendents and C.E.G.E.P. directors general. Another sub-group works at adapting the instruments for public servants in a provincial department. Finally, we are planning a comparative study with supervisory personnel in private enterprise and another one in the para-public sector. We also have translated the instrument into English.

Conclusions

Older workers do not show the specific characteristics which are generally associated with aging. As a matter of fact, in most cases they would have much more in common with people coming from similar socio-economic backgrounds than they would have with their age group.

On the other hand, there seems to be little doubt about the existence of specific phenomena related to the mid-life cycle. Equally accepted seems to be the fact that there are implications for an organization. These organizations have been generally ignoring that age group when deciding on their in-service programs. These people have been taken for granted: "They have no alternative but to stay...", "They need nothing, being mature men and women...".

One should realize that people in their mid-life cycle will always represent the basic labour force of any organization of respectable size, and that they are those people who have elected to stay and who are not yet thinking of retirement. An administrator should play fully on the needs of these people if the organization is not to alienate the backbone of its labour force.

Recognizing those facts seems to be especially important at the present time in North America, with an aging labour force. The teachers' situation being what it is in Canada, it is the responsibility of leaders, administrators, of any persons with some say in the work organization of our school systems, to find for themselves the specifics of that group of aging workers. It is equally important to spread the information among teachers so as to give them some sense of security and to help them face positively their personal and professional evolution. I do believe that it should be part of any training program for administrators to study the phenomena related to the mid-life cycle and their potential influence on the work situation.

Lack of interest in those ideas may be part of the explanation for the sense of alienation of teachers, in some school systems. If one is to awaken in them their sense of affiliation one has to know their needs. How can we expect productivity from teachers whose basic needs are not even taken into account? All the theories on motivation and productivity are based on the needs of the individual.

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PROFESSIONAL DEVELOPMENT: RENEWAL STRATEGIES

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As a consultant I work with aging employees in situations where a work force is getting older. The scenario usually goes like this. Demand, be it for a product or service, has slackened. There is little hiring. Few employees leave and generally those who retire make up for potential redundancies. The result is that the mean age of employees creeps up every year.

There is a perception that this is dangerous. In the case of education the perception is twofold. First, it is that a great body of aging teachers will not be able to maintain their effectiveness in the classroom, and second, that young teachers are better than old teachers. Therefore, an educational system that has a lot of older teachers with few young teachers is in jeopardy. If this perception is held by parents and the community they can put pressure on the school board to do something. The board then puts pressure on superintendents who in turn put pressure on teachers. Yet few are sure of exactly what kind of pressure they should be applying.

The perception that aging teachers are not effective does not bear much resemblance to reality. Research indicates that only a very few older workers are unable to be effective until they are 65. These are people who suffer from ill health. Their lack of effectiveness is not due to aging but to ill health. As long as health is maintained nothing should prevent a teacher from performing at top level until retirement. This, then, is the first message that should be communicated in no uncertain terms to teachers themselves.

As for younger teachers being better than older teachers, there is evidence that there are good older teachers and good younger teachers and some bad older teachers and some bad younger teachers. Age itself is not a meaningful criterion for teaching ability.

But knowing this does not remove the pressure that can be put on older teachers by the community or by superintendents. This is, I suggest, because a problem of faulty perceptions is more difficult to deal with than reality. No single lecture citing pertinent research will change perceptions. Instead, strategies that hit at perceptions need to be worked out by all those involved. And, I suggest, these need to be worked on over time. Eventually, when these strategies begin to achieve their goals, more realistic impressions will be substituted for faulty perceptions and pressures will lessen.

The most dangerous thing about the erroneous perception that aging teachers are ineffective is that teachers accept and believe it themselves. If teachers believe their teaching ability deteriorates with age it most surely will.

There are a number of strategies which can be developed to attack the problem of an aging teaching profession. One is contract negotiations. It is helpful to bargain on both sides with knowledge of what will make older teachers retain their effectiveness. This is one way in which school boards and teachers' federations can work towards a common goal.

For example, studies have shown that for older employees, money is not what they want most from a contract. The opportunity to work less and to elect to take time away from the job (with or without pay) are. If both sides are aware of this they can work towards building in opportunities for job sharing, half year leaves of absence, and other more innovative options. These opportunities can add spice and vitality to the lives of mature teachers and take some pressure off a tight job market at the same time.

A second strategy is to educate management, in this case principals, vice principals, and others who work with teachers, about some of the realities of aging. It is extremely helpful for them to know what to expect and more importantly what not to accept from their older teachers. And believe me a teacher working in a school where a principal has a knowledgeable approach to his aging staff is a far better place to work. The third strategy is the one I have been asked to address here. This is how teachers' federations should go about planning professional development and renewal strategies for aging teachers.

The first thing I suggest is that goals be set and strategies designed for professional development which will meet the needs of mature teachers. A major goal would be to get teachers to know enough about the aging process, its characteristics, advantages (there are some) and disadvantages so that they have a realistic sense of their own aging. If people know what they can expect of any situation, both the positives and the negatives, they will handle it better. This is why teachers need to be educated directly about the realities of aging.

This doesn't mean that each teacher has to have a complete course in Gerontology 101 or, on the other hand, that a pre-retirement course at age 60 will do the trick either. Although each has its place, if these approaches are used singly as a stab at rectifying the perception that there are a lot of old teachers out there who are damaging education, they will not be effective. Rather, a planned program of professional development which gives information on aging and encourages a fresh look at life perspectives, career development, and values orientation is suggested. Furthermore, such a program should be designed to begin where teachers are, that is dealing with problems facing middle aged and mature teachers now.

This program should also install into the consciousness of teachers that the myths and unattractive stereotypes of aging and ineffectiveness on the job that come with age are just that: myths. An acceptance of these unfortunate stereotypes creates a climate of prejudice against older

persons called ageism. Because ageism is extremely dangerous to teachers they should learn to recognize it, fight it, and do their best to eliminate it.

There is throughout our society a prejudice, sometimes subtle, sometimes not so subtle, against age and against aging people. This begins when those discriminated against are somewhere around middle age. To say that we live in a youth oriented society is trite. We all know this. But seldom do we think about the consequences this brings. What happens in the workplace is that middle aged and older employees, in this case teachers, are considered inferior. Not because they are, but because our cultural tradition has it that way. This is prejudice, because the evidence is that they are not. Study after study has found that overall, middle aged and older employees perform as well as younger employees. There is no reason to believe that teachers are any different.

What is infuriating about this discrimination against middle aged and older persons is that middle aged and older employees themselves are conditioned not only to accept it but to perpetuate it. I suggest that teachers be made aware of age discrimination and be encouraged in all they do <u>not</u> to perpetuate the myth that youth in the classroom is better just because our society says so.

Incidentally, myths about incompetencies of aging employees appear more frequently during periods of high unemployment and low economic growth such as we have just witnessed.

There is no doubt about it that youth is attractive and has some very real advantages. So does maturity. But maturity loses every time if its very worst characteristics are highlighted. Teachers know very well some of the less attractive sides of youth. Yet these are not what we see in the Pepsi commercials. Therefore, in every renewal strategy you develop I suggest building into it directly or indirectly an attack on discrimination against age. Because teachers themselves are just as susceptible as others, they can unwittingly buy into the prejudicial point of view that

older teachers are not as good as younger ones. When they do this they harm themselves and they harm their profession.

Let's take a closer look at age discrimination or ageism. Ageism can be defined as negative stereotypes associated with age. Ageism perpetrates a myth about older workers, older teachers. The myth is that older teachers are not as capable. They can't do the job as well as the younger teachers. Yet studies have found that in terms of performance evaluation, absenteeism, trainability, and intelligence, older is just as effective. (1), (2).

Jack Orsoffsky, executive director of the National Council on Aging (3) compares ageism to racism and sexism. He says that our society suffers when it perpetrates all or any of these forms of discrimination. Yet members of the white race will never be black. And men who suffer too because of women's discrimination will never be women. But when we discriminate against age we slash our own tires, for ultimately the stereotype we project onto others we absorb into and believe about ourselves.

Concern about our society forming unfortunate stereotypes about aging was one of the major themes of the large conference on aging sponsored by the province of Ontario in June of this year. It suggested that stereotypes of the old make us learn to become old.

Michael Kearl (4) attempted to determine why unflattering myths of aging exist. He observed that ageism stereotypes the elderly in terms of the characteristics of the least healthy and least alert, although it insists that all elderly are not alike. He observes that older people internalize what they read and hear and come to believe it themselves. Kearl came to the conclusion that ageism exists because it is psychologically and socially functional for some of the elderly. For example, he suggested that it is easier to get and to accept old age benefits if the receiver believes he is old and unfortunate.

While Kearl observed that those over 65 find it functional to buy into the unflattering myths of aging I suggest that it can be functional, if not advantageous, for some middle aged and older teachers to accept stereotyped myths about age at work. But what is advantageous in the short run can be disadvantageous in the long run.

This is how ageism in the school system can be functional. If a teacher is excused from performing a routine responsibility because of his or her age, being an older teacher becomes an advantage. The older teachers who accept this as an expected privilege will eventually feel that not fulfilling a responsibility because of age is a right. So will the principal, other teachers, and even students. Then the older teacher is not performing as he or she could because of age. It is then a very short step to believing that the teacher is not capable of performing the task because of age. This is a boomerang situation.

It is one thing to excuse a person from a routine and possibly boring responsibility for ill health, no matter what age. It is quite another to excuse a teacher from a routine task because of age and I suggest it is vital that teachers and principals know that it is a dangerous cop out to accept such a situation.

There is danger in believing that as a person ages he or she cannot learn, cannot relate to others, or cannot teach, because once a person believes this it can become a reality. Believing that one is not as capable because of age is detrimental to morale, self esteem and the sense of competence. This must be fought.

The reason why ageism in the workplace is not tackled head on is that most often we don't recognize it. People must be made aware of discrimination before it can be fought. But Mr. Dan Knowles, vice president of personnel for Grumman Aircraft in New York told a National Council on Aging meeting in 1983 that business and industry will not do anything about ageism at the work place until government forces the issue. (Like equal opportunity legislation). But he did not have much hope of

government forcing anything to do with age because those who are in power and making the laws, even though they may be old, are not themselves being discriminated against.

But ageism can be fought by a professional association by making teachers conscious of it. And teachers themselves can tackle it by not accepting it for themselves, from their colleagues or in the classroom. Teachers are also in the fortunate position of being able to challenge attitudes, stereotypes and myths about age in the classroom.

Now I want to look at some myths about aging that should be taken into account when preparing professional development programs for teachers, no matter what the thrust of the professional development.

First, the myth that older people cannot learn as easily or as well as the young. There is a great deal of research looking into the ability of the middle aged and older person to learn. Even a small review of this would be impossible to relate here. So let me summarize three findings that have particular relevance for professional development.

First, middle aged and older people do retain their ability to learn. But learning requires practice. The more practice, the more easily something is learned. In this regard learning might be compared to the ability of an athlete in training versus the sedentary, overweight executive. It is not difficult to predict which of these two would win a race. But overweight, inactive men over 50 have taken to jogging and run marathons. Men who do this are usually highly motivated. A 50 year old who runs needs to be motivated more than the 20 year old athlete. The same is true with learning. Many studies have shown that for the older person motivation is key when it comes to learning.

So in the preparation of professional development programs for older teachers, no matter what the content, recognize that older teachers can learn, but a healthy amount of attention should be given to motivation.

One motivator might be to be sure teachers know that those who keep mentally active are healthier and more vital not only in the later stages of their careers but well into retirement. Research evidence for this is building. Personal observation in work I have done with seniors in post-secondary education is overwhelmingly convincing. The older person with an active mind is vital, alert, and has interests ranging from literature to computers and foreign languages. But to keep this way the mind must be kept active. Morley Callaghan put it this way on his 80th birthday and date of the publication of his then most recent book. Barbara Frum was interviewing him on the Journal and she asked him if there would be more books. He replied, "Of course I'm writing my next book. It's a matter of using the imagination. One's imagination is like a rubber band. When kept flexible by daily use it will work better and better. But if left in a drawer it will soon rot, break and turn to dust with the slightest stress".

Next, we recognize that sometimes it is necessary for teachers to learn new things and adapt to a change in the system. Older persons learn new tasks and accept change best if they understand and feel free to react to why a change is taking place. Time spent discussing with the older teacher the merits of something being learned is well spent.

Third, the older person learns best if presented with a manageable amount to learn at one time. Insisting that the 60 year old teacher has to learn everything about computers is overwhelming. But learning how to run a particular program that will permit a class to individually meet a learning objective is manageable and likely to be accepted quite readily.

There is much more I could relate about smashing that old stereotype about the old dog and new tricks. But note that this faulty old saying may be functional for some teachers. If a teacher believes somewhere in the recesses of his mind that old dog new tricks routine, he may convince himself that he doesn't have to go to the bother of learning new things. And this stereotype, like many others, will boomerang, because observers will have direct evidence that, indeed, old teachers cannot learn new tricks.

Finally, I want to stress that it is good to recognize in developing strategies to deal with an aging work force that unlike other age groups there is little if any homogeneity amongst middle aged and older persons. From psychology we know just what to expect from a six month old child. And we know a lot about what to expect from a six year old. But we do not know anything certain about a 50 year old. Life experiences, health, personal relationships, family and interests can be remarkably different. In fact there is evidence that as people reach the age of 65 they are as different from their peers as they ever have been or ever will be in their lives.

The similarities it was once thought that gerontology research would make evident about aging persons turn out to be rather limited and the differences are what stand out. But as well as <u>being</u> different, people also <u>adjust differently</u> to their own aging. Some adjust well, some make a fair adjustment and some adjust poorly. It would be unrealistic to suggest that, with what we know now, renewal strategies could be developed that would help teachers achieve a good adjustment to age. But it might be helpful to recognize that how people adjust to their own aging is reflected in their attitudes and behaviour.

The first to observe and make concrete use of this were, as you might guess, advertisers who were looking for a niche in the older person market. When it was first recognized that our aging population was growing proportionally, marketing people felt that the older population was a market niche and they should be directing their advertising for certain products to that niche.

But marketing professors French and Fox (5) observed that the older population was no market niche at all, but several market segments with quite different characteristics. They teamed up with a group of gerontologists with the objective of characterizing the older market and they distinguished nine distinct population segments according to how they adjusted to aging. They named these segments according to the characteristics of the people in them. Descriptions were the focused, the disengaged, the holding-on, the succourance seekers, the constricted, etc.

They pointed out advertisements and products which would appeal to some of these groups but not others. For example, the holding-on group, who want to hang on to youth at any cost, would be attracted to advertisements for Oil of Olay and bee pollen formula, both which promise eternally youthful skin. But they would be turned off by ads for magnifying glasses or denture cleaner.

Interestingly enough, French and Fox calculated that the disengaged segment, the group which most reflects our usual stereotype of the senior citizen, represented only 9 per cent of the population, a segment hardly worth considering.

So the marketing and advertising gurus have discovered that the aging population is anything but homogeneous. Take note in preparing professional development strategies for mature teachers. Do not expect a similar reaction from all teachers over age 45. Their makeup and their attitudes to aging and just about everything else will be different from each other.

One similarity should be recognized, however. Those born in a particular era do share a similar value system. A teacher over 50 has a quite different value system than a teacher under 30. Values are shaped by historical events such as the great depression, the Second World War and Star Wars. When different value systems are not recognized, friction can be created. It is healthy for colleagues of different ages to take some time to appreciate different value systems at work. Some intolerance about age is really a lack of appreciation of the societal value system of another era.

To conclude, some suggestions on how to approach professional development aimed at the older teacher. First what not to do. Don't directly or indirectly by attitude hit teachers with something like this. "Unfortunately you are getting old. So you need to know something about what it is like to be old. This program will tell you all you need to know." In our society this is a complete negative. (In China, with very

different societal attitudes to aging, this might be an exciting approach.) But most Canadians would interpret this as "Who wants to know about getting old and the horrors it brings. What a turn off".

Instead, start where teachers are now and get them to deal with their own personal growth. As people age they become more inward and much more interested in their own person than in new teaching methods. They are interested in solving the human problems facing them now. Many of these problems, although not recognized as such, are rooted in aging and their perspective on their own aging. Therefore, it will be easier to motivate with programs which deal with these problems yet also bring in some of the realities of aging.

For example, a workshop I conducted for a professional association on career options did this. It might have been entitled, "Careering Through the Years." The audience ranged from age 25 to age 60. The objective was to reflect on where their careers were going and on successful approaches to careers. Normal high points and frustrations were assessed in different career stages. Case studies were discussed. There was a recognition that at career entry some frustrations were quite normal and experienced by most and that this is true at each career stage. When it got to the final career stage, the entire group was discussing what kind of pre-retirement activities were appropriate. Done in the context of normal career development, this workshop was met with considerable enthusiasm. Middle age turn-off, male mid-life crisis and planning for retirement were not threatening because they were discussed as normal life passages.

Programs on societal value systems through the decades and relationships throughout life, (in a Gail Sheehey -- author of Passages -- approach) are other examples of programs with an aging component that can be dealt with from the perspective of where people are. In other words, I suggest a human development rather than gerontological approach.

Now to summarize. Teachers need to know about aging so that they can intelligently fight ageism perpetuated by themselves, their colleagues, students and all others with whom they work.

Teachers can learn and have active minds well beyond the age of 65. They should be encouraged to learn, but motivation is important. Older teachers are quite different from each other in their aging, human characteristics and attitudes to aging. But value systems within a particular age group are similar. Understanding value systems of different age groups is helpful in understanding aging.

Finally, I suggest that a professional development strategy for dealing with aging teachers be consciously and carefully designed and that programs on aging be given a human development perspective. While professional development is just one approach to dealing with aging teachers, I believe that if handled well it can be effective in lessening the pressure put on the profession by the numbers of older teachers in its midst.

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